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# SOUTHERN AFRICA ENERGY PROGRAM YEAR 1 – FY18 ANNUAL REPORT

## MARCH 15, 2017 – SEPTEMBER 30, 2018

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# ACRONYMS

| Acronym | Definition |
|---|---|
| ADER | Agence pour le Développement de l'Electrification Rurale |
| AEF | Africa Energy Forum |
| AfDB | African Development Bank |
| BERA | Botswana Energy Regulatory Authority |
| BPC | Botswana Power Corporation |
| BTG | Beyond the Grid |
| BW5 | Bid Window 5 (of REIPPP Programme) |
| CENORED | Central Northern Regional Electricity Distributor (Namibia) |
| CEC | Copperbelt Energy Corporation |
| CEO | Chief Executive Officer |
| COR | Contracting Officer's Representative |
| CoW | City of Windhoek |
| CP | Cooperating Partner |
| CTT | Central Termica de Temane |
| DBSA | Development Bank of South Africa |
| DFID | UK Department for International Development |
| DOC | Development Outreach and Communications |
| DSM | Demand Side Management |
| E&S | Environmental and Socioeconomic |
| ECB | Electricity Control Board (Namibia) |
| EDM | Electricidade de Moçambique |
| EE | Energy Efficiency |
| EEC | eSwatini Electricity Company |
| EMU | Electrification Management Unit |
| ENH | National Enterprise of Hydrocarbons |
| EOI | Expression of Interest |
| EPC | Engineering, Procurement, and Construction |
| ERB | Energy Regulatory Board (Zambia) |
| ESC | SAPP Environmental Subcommittee |
| ESCOM | Electricity Supply Corporation of Malawi |
| ESERA | eSwatini Energy Regulatory Authority |
| ESIA | Environmental and Social Impact Assessment |
| ESREM | Enhancing Sustainability of Regional Energy Markets |
| ETG | Energy Thematic Group |
| EWT | Endangered Wildlife Trust |
| EXCO | Executive Committee |

| | |
|---|---|
| FMM | Financial Mobilization Memo |
| FY | Fiscal Year |
| GCA | Grid Connection Agreement |
| GET FiT | Global Energy Transfer Feed-in Tariffs |
| GOGLA | Global Off-Grid Lighting Association |
| HICD | Human and Institutional Capacity Development |
| HRMSC | Human Resources Management Sub-committee |
| HRWG | Human Resources Working Group |
| IFC | International Finance Corporation |
| IPP | Independent Power Producer |
| IPP Office | South Africa Department of Energy (DoE) Independent Power Producer Procurement (IPP) Programme Office |
| IRP | Integrated Resource Plan |
| IWaSP | International Water Stewardship Programme |
| JDA | Joint Development Agreement |
| KfW | Kreditanstalt für Wiederaufbau (German Development Bank) |
| KPI | Key Performance Indicator |
| kV | Kilovolt |
| LCOE | Levelized Cost of Energy |
| LEC | Lesotho Electricity Corporation |
| LEDs | Low Emissions Developments |
| LOC | Letter of Collaboration |
| M&E | Monitoring and Evaluation |
| MCA | Millennium Challenge Account |
| MCC | Millennium Challenge Corporation |
| MERA | Malawi Energy Regulatory Authority |
| MIREME | Minister of Mineral Resources and Energy (Mozambique) |
| MITADER | Ministry of Land, Environment and Rural Development (Mozambique) |
| MITC | Malawi Investment Trade Centre |
| MME | Ministry of Mines and Energy (Namibia) |
| MNRE | The Ministry of Natural Resources and Energy |
| MW | Megawatts |
| NDA | Non-Disclosure Agreement |
| NEI | Namibia Energy Institute |
| NERSA | National Energy Regulator of South Africa |
| NORED | Northern Regional Electricity Distributor |

| | |
|---|---|
| OPC | Office of the President & Cabinet |
| OPIC | Overseas Private Investment Corporation |
| OSC | SAPP Operating Subcommittee |
| PA | Power Africa |
| PATT | Power Africa Transaction Tracker |
| PAU | Project Advisory Unit |
| PCCBIS | Portfolio Committee Capacity Building and Information Sharing Meeting |
| PIM | Project Investment Memo |
| PMEP | Performance Management and Evaluation Plan |
| PPA | Power Purchase Agreement |
| PPPC | Public Private Partnership Commission |
| PPZ | Partial Protection Zone |
| PS | Permanent Secretary |
| PV | Photovoltaic |
| Q1 | Quarter 1 |
| Q3 | Quarter 3 |
| QOS | Quality of Service |
| RE | Renewable Energy |
| REA | Rural Electrification Agencies |
| RED | Regional Electricity Distribution Company |
| REEEP | Renewable Energy and Energy Efficiency Partnership |
| REFiT | Renewable Energy Feed-in Tariff |
| REIPPP | Renewable Energy Independent Power Producer Procurement |
| RERA | Regional Energy Regulatory Association |
| RFI | Request for Information |
| RFP | Request for Proposals |
| ROW | Right of Way |
| SACREEE | SADC Centre for Renewable Energy and Energy Efficiency |
| SADC | South African Development Community |
| SAEP | Southern Africa Energy Program |
| SAPP | Southern African Power Pool |
| SAPP CC | Southern African Power Pool Coordination Center |
| SB | Single Buyer |
| SHS | Solar Home System |
| SIAZ | Solar Industry Association of Zambia |
| SMO | System Market Operator |
| SOW | Scope of Work |
| SPEED+ | Supporting the Policy Environment for Economic Development |

| | |
|---|---|
| SPV | Special Purpose Vehicle |
| SRUC | USAID Sector Reform and Utility Commercialization Program |
| SSIR | SAEP Support Information Request |
| STTA | Short Term Technical Assistance |
| EWSC | eSwatini Water Services Corporation |
| TIFF | Transmission Infrastructure Fund Facility |
| TNA | Training Needs Assessment |
| TO | Task Order |
| TOR | Terms of Reference |
| TTP | Temane Transmission Project |
| TTS | Targeted Transaction Support |
| US$ | United States Dollar |
| USG | United States Government |
| USAID | United States Agency for International Development |
| USTDA | United States Trade and Development Agency |
| VAT | Value Added Tax |
| vRE | Variable Renewable Energy |
| WARMA | Zambia's Water Resource Management Authority |
| WB | The World Bank |
| ZESCO | Zambia Electricity Supply Corporation |
| ZPPA | Zambia Public Procurement Authority |
| ZTK | Zambia-Tanzania-Kenya Interconnector Project |

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## FY18 SAEP NUMBERS

**2,130.38 MW**
Reached Financial Close

**64,413**
Actual Connections

**57 TRANSACTIONS**
Supported by Transaction Advisory Services

**7 LAWS/POLICIES**
Drafted or Revised

**14 GLOBAL CLEAN ENERGY**
Trainings Implemented

Year 1 of the United States Agency for International Development (USAID) Southern Africa Energy Program ("SAEP" or "the Program") was a period of establishment, growth and success. From Program inception in March 2017 to September 30, 2018, SAEP advanced a host of activities that are contributing to Power Africa's goals of creating a brighter, more sustainable future for many across the Southern African region. The SAEP Year 1 Annual Report ("the Report") details SAEP's activities from the past year; from transaction advisory support for large-scale energy sector projects to assistance with off-grid financial models. Below is an overview of SAEP's key events, milestones and achievements over the 18-month period covered in this report.

- Facilitated **financial close of 2,130.38 megawatts (MW)** of new renewable energy (RE) generation capacity in South Africa
- Achieved **64,413 new off-grid connections** through support to solar home system (SHS) and other off-grid providers
- Developed or revised **seven laws, policies, strategies, plans and regulations** to improve the enabling environment and reduce barriers to energy sector growth
- Supported **14 off-grid energy companies** across sub-Saharan Africa to improve market knowledge and increase sales through active transaction advisory and the development of go-to-market strategies
- Provided critical transaction advisory assistance that **advanced several transactions**, including:
    - Supported the competitive procurement of a leading-edge 100 MW solar project in Botswana
    - Assisted in securing land for the 25 MW Lilongwe Solar PV
    - Established partnerships and finalized Letters of Collaboration (LOC) for several significant transactions including Mpatamanga Hydropower Project in Malawi
    - Developed a three-year strategic plan that focuses on data-driven growth and increased revenue streams for a Mozambican SHS distributor
- Added **9,390.38 MW** to the Power Africa transaction pipeline
- **Established strategic relationships with over 100 counterparts**, of which 32 have been codified through signed LOCs

# 1 INTRODUCTION

## 1.1 THE PROGRAM

The USAID SAEP contract (AID-674-C-17-00002) was signed between USAID/Southern Africa and Deloitte on 15 March 2017. The SAEP Year 1 Annual Report[1] highlights results achieved since Program start-up through 30 September 2018.

The objective of SAEP is to increase investment in electricity supply and access in Southern Africa by strengthening the regional enabling environment and facilitating transactions. SAEP addresses five key constraints to energy sector investment, including (1) ineffective regulation, (2) poor planning and procurement, (3) insufficient and poorly managed electricity trade, (4) lack of demonstrated and scaled RE and energy efficiency (EE) technologies and practices, and (5) weak institutional and human resource capacity for energy sector management.


*The SAEP team at the SAEP Year 1 Mid-Year Review session in South Africa, March 2018. Photo: SAEP*

SAEP is USAID's primary implementing mechanism for Power Africa in the Southern African region. As part of Power Africa, SAEP works to contribute to Power Africa's continent-wide goals of increasing new power generation by 30,000 MW and increasing new connections by 60 million by 2030. (For more information on Power Africa, see the box on page 3). Over its five-year life, SAEP will meet Program-specific goals to increase electricity supply and access and will deliver:

- 3,000 MWs of new power generation
- 1,000 MWs of new transmission capacity
- 3 million new connections

[1] The full report name as per Contract Number AID-674-C-17-00002 is Annual Performance Management Progress Report

## 1.2 OVERVIEW

SAEP is a forward-looking program that aims to overcome the challenges of access to energy through actively advancing power sector development in Southern Africa. SAEP employs a proactive, responsive and flexible approach to the design, deployment and monitoring of interventions compatible with, and responsive to, the evolving needs of the region. SAEP recognizes that in order to sustainably advance the accessibility, reliability and security of the regional energy ecosystem, the Program must promote policy and regulatory reforms so as to improve the enabling environment and must stimulate private sector participation in the energy sector so as to realize new investment within the power sector.

SAEP is designed to increase electricity generation and to improve access to power in 11 countries located throughout Southern Africa[2] while objectively quantifying and measuring progress towards five key outcomes or work streams of the Program:

- Improved regulation, planning and procurement for energy
- Improved commercial viability of utilities
- Improved regional harmonization and cross-border trade
- RE and EE technologies and practices locally demonstrated and scaled
- Increased human and institutional capacity

**Power Africa** is a U.S. government-led public-private partnership launched in 2013 to increase electricity access in sub-Saharan Africa by adding more than 30,000 MW of electricity generation capacity and 60 million new home and business connections. Power Africa works to remove barriers that impede energy development in Africa and to unlock the substantial natural gas, wind, solar, hydropower, biomass and geothermal resources on the continent. Power Africa brings together all the U.S. Government agencies who work in energy on the continent; multilateral and bilateral development partners such as the World Bank, AfDB, etc.; and more than 140 private sector partners.

SAEP is working to achieve these outcomes by strategically aligning energy reform and electrification goals with investment opportunities through i) tracking and working to close transactions, ii) coordinating with local and regional resources and iii) building human and institutional capacity. SAEP is employing a results-oriented framework for decision-making related to the identification, prioritization and selection of intervention activities and programming with the aim to increase and accelerate private sector investment and to move transactions forward for increased generation and access to electricity.

Table 1 shows targets and results for SAEP's Year 1 as well as targets moving forward into Year 2.

***Table 1: SAEP High Level Results***

| | Generation Capacity (MW) Reached Financial Close | Transmission Capacity (MW) Reached Financial Close | New Connections |
|---|---|---|---|
| **Year 1 Target** | 325 | 0 | 50,000 |
| **Year 1 Results**[3] | 2,130.38 | 0 | 64,412 |
| **Year 2 Target** | 352 | 1,000 | 400,000 |

The remaining sections of SAEP's Year 1 Annual Report document the activities pursued by the Program, highlights success realized to date as well as those anticipated in the coming year(s), and

[2] Angola, Botswana, eSwatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe
[3] As at the time of submission, 30 September 2018

presents challenges identified and – where applicable – mitigation strategies implemented during the year. A series of appendices provide details on SAEP successes, Program staffing (short term technical assistance (STTA) and resources mobilized), performance indicators and results, and progress reporting against SAEP Year 1 Work Plan activities. This includes completion of outputs and progress against the Work Plan activities, as well as any proposed adjustments to Program delivery.

## 1.3 PROGRAM START-UP

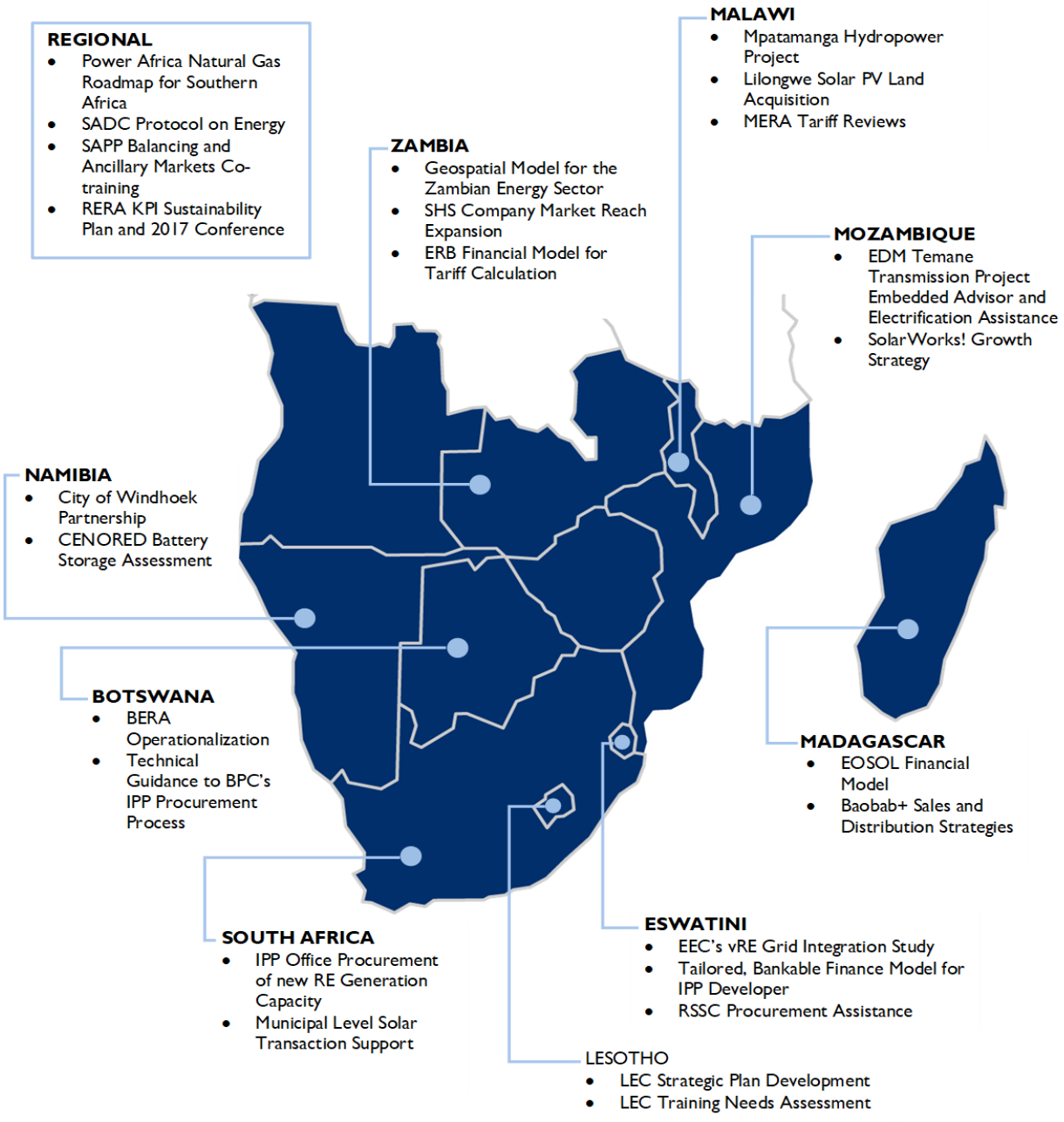
USAID awarded SAEP in March 2017 and the Program quickly hit the ground running. Stakeholder engagement was at the core of SAEP's strategy for start-up and Year 1 Work Plan design. Below are activities highlights from the start-up period:

- **Post-award Conference, 20 April 2017.** The SAEP leadership and support team participated in meetings with USAID in Pretoria, South Africa to have a formal kick-off of the Program before the technical team was deployed to develop a stakeholder engagement plan for building out the Year 1 Work Plan
- **SAEP Mobilization and Quick-Start Plan.** SAEP developed a plan of action for its mobilization activities and schedule over the first 100 active days of the Program. The plan identified quick start programmatic activities that were high priority and could begin immediately while the SAEP team engaged with stakeholders across the region and developed the full Year 1 Work Plan. With USAID approval, the plan also provided for SAEP to begin implementing programmatic activities prior to completion of the full SAEP Year 1 Work Plan
- **Multi-Country Stakeholder Engagement and Work Planning Trips.** Over the first six months, meetings in various target countries in the region as well as participation in events like the African Utility Week in Cape Town and the Africa Energy Forum in Copenhagen took place from 11 May to 28 June 2017
- **Year 1 Work Planning Session in Botswana.** This session, held from 2 to 6 June 2017, brought together inputs from multi-country stakeholder interactions and enabled the finalization of the SAEP Year 1 Work Plan
- **Harmonization with Existing Power Africa Efforts in Southern Africa.** SAEP worked closely to build programming that integrated and enhanced other Power Africa activities across Southern Africa. In Malawi, the Millennium Challenge Corporation (MCC) had been operating for four years working on sector reform, unbundling and capital infrastructure investments. SAEP worked with the MCC team to determine what activities SAEP could conduct in Year 1 that would be additive or supportive and have had detailed take over discussions to begin to support the sector as MCC closes out. In addition, the USAID Power Africa Transactions Reform Program (PATRP) had transaction advisors and were supporting governments and the private sector on transactions across multiple countries. SAEP worked with PATRP to transition activities and deliver complementary programs to provide consistent advisory services to counterparts where required

# 2 MAJOR ACTIVITIES DURING THE REPORTING PERIOD

In Year 1, activities were conducted in nine of SAEP's eleven focus countries: Botswana, eSwatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa and Zambia. In Angola, scoping continued all through Year 1 and activities are planned for Year 2. Following guidance from the United States Government (USG), SAEP did not implement bilateral activities in Zimbabwe. Across the region, the Program collaborated with national ministries, utilities, transmission and distribution companies, regulators and the private sector like Independent Power Producers (IPPs) and SHS providers. Figure 1 gives an overview of major Year 1 activity highlights by country.

***Figure 1: Overview of SAEP's Major Activities per Country***



## 2.1 BOTSWANA

BY THE NUMBERS

**100 MW**
Pending Financial Close

**1 LAW/POLICY**
Proposed/Revised

Botswana relies on electricity imports to meet demand, despite having resources to generate considerable amounts of its power from coal, renewables, and natural gas. Only 450 MW of the 750 MW installed capacity is available to produce electricity within the country. Furthermore, Botswana has significant solar potential to increase its power generation capability. However, the country faces challenges relating to limited experience with RE and the lack of an Integrated Resource Plan (IRP), which affects its ability to implement sustainable on- and off-grid energy generation capacity. The Botswana Energy Regulatory Authority (BERA) started operating in September 2017 and is an important institution to begin to allow competition in the Botswana energy market, including the introduction of IPPs.

### 2.1.1 TOP ACHIEVEMENTS AT A GLANCE

#### Building a Solar Future in Botswana

SAEP has provided technical guidance integral to building out BPC's overall IPP procurement process, leveraging international leading practices to support a 100 MW solar PV procurement. Key results include:

- Facilitating a review of the information received in response to the Request for Information (RFI) from developers interested in building the 100 MW solar project. SAEP advised on the creation of criteria to be used in reviewing the information and served in an advisory role in the review process
- Facilitating an independent review of proposals with BPC for financial advisors and engineering advisors. A selected financial advisor and engineering advisor were approved by the BPC Executive Committee and began work in December 2017
- Identifying and vetting four land sites required for the project; the Ministry of Land signed land leases for the parcels in late 2017
- Developing a project management process applicable to procurement of energy generation projects that would be developed by an IPP
- Providing multiple guidance documents including outlines of the project management process, application of the process to BPC's specific projects and detailed task charts for use by the BPC Project Manager to facilitate the procurement process for the 100 MW solar PV project

*For more details on support to BPC, refer to the success story section in Appendix A.*

#### Operationalizing Botswana's New Energy Regulator

SAEP provided capacity building and general technical assistance to BERA as it kicked-off as a regulator and became a RERA member. BERA faced the same challenges as other new regulatory institutions – completing tasks to make itself operational while also processing regulatory requests. Over the last Year 1, SAEP has delivered both operational and regulatory advice, including:

- Designing a 12-month operationalization roadmap
- Reviewing the BERA Economic Rules (now referred to as the "Electricity Rules"), which were then revised with the Executive Director and staff. The Rules will be the subject of a future public hearing and then adopted for use

- Assisting BERA staff to develop procedures and data requirements for electricity licensing
- Developing a simple model for determining the Levelized Cost of Energy (LCOE) so that BERA can compare the costs of different energy projects
- Introducing BERA to the concept of developing formal data requests to clarify and/or understand a tariff application or a Purchase Power Agreement (PPA)
- Drafting a memorandum on net metering for BERA consideration
- Supporting BERA's development of tariff procedural and substantive guidelines. BERA management has adopted the final guidelines

### 2.1.2 ADDITIONAL HIGHLIGHTS FOR BOTSWANA

Additional activities that SAEP engaged in during Year 1 include:

- BPC asked for further support and technical assistance from SAEP in moving forward 12 grid-tied projects and 20 off-grid projects. SAEP completed a scoping activity, which resulted in a timeline delineating the actions that need to be completed, who is responsible for those actions and when they need to be completed. SAEP shared this with BPC for review and SAEP support is contingent on the two parties coming to agreement on the list of action items and delivery timeline given lessons learned from the BPC procurement support on the 100 MW solar project

## 2.2 ESWATINI

eSwatini heavily relies on electricity imports from South Africa's national utility, Eskom, to meet demand. In 2017, demand peaked at 232 MW and is projected to rise to 342 MW by 2037. This exposes the country to significant risks faced by all captive customers, especially that of tariff escalation. For this reason, eSwatini is working to increase indigenous generation.

BY THE NUMBERS

**85 MW**
Pending Financial Close

As eSwatini embarked on increasing RE penetration and implementing their new RE master plan, SAEP supported the country in implementing pieces of this initiative in Year 1 in close collaboration with the Ministry of Energy.

### 2.2.1 TOP ACHIEVEMENTS AT A GLANCE

#### Variable Renewable Energy Grid Integration Study for EEC

In Year 1, SAEP completed the first phase of a two phase vRE grid integration study to assist the eSwatini Electricity Company (EEC) in assessing the amount of RE it can introduce into the eSwatini grid. The vRE grid integration study is an important precursor to pursuing IPP procurements by enabling the government to set procurement goals. The first phase of the study focused on a characterization of the EEC system, and the second will focus on testing the levels of vRE integration under various predetermined scenarios. An internal report on the first phase of the EEC vRE grid integration study was finalized in Year 1. In Year 2, SAEP will combine the second phase of the study to determine the grid capacity, which will be available for public consumption.

#### A Tailored, Bankable Financial Model Created for Local IPP

GBA Swaziland, a local eSwatini solar developer, asked SAEP to assist in developing a financial model for use when engaging potential investors and commercial banks. SAEP completed the model in Year 1, which is being used by the developer as they pursue funding for their 10 MW project. The dynamic

model converts various inputs and assumptions into financial results that provide insight into an investment decision. Through the process of developing the model with SAEP, the solar developer used the learning opportunity and – as a result – significantly reassessed their financing assumptions for their existing projects. The financial model can be modified and updated as needed for use on additional projects in future years.

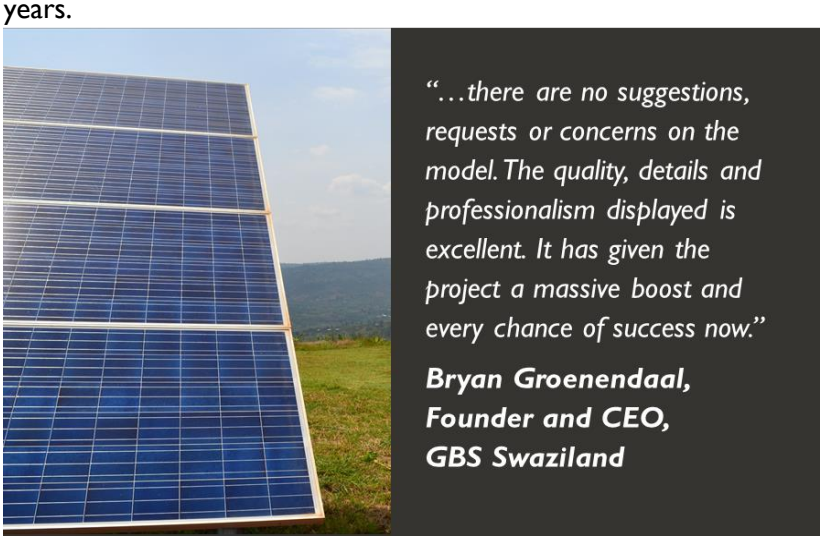



*Photo: Power Africa*

### Providing Procurement Experience to RSSC

The Royal Swazi Sugar Corporation (RSSC), a leading sugar producer in eSwatini, is looking for avenues to reduce energy costs and be grid independent, utilizing biomass and solar sources. RSSC requested technical and commercial assistance from SAEP to support their RFP application review process for a 10 MW grid-tied solar PV plant to operate three sugar mills (4 MW at Simunye, 4 MW at Mhlume and 2.5 MW at Ngomane). In Year 1, SAEP provided critical technical and financial reviews of the responses to the RFP and created a transparent procurement process, greatly enhancing the likelihood that the three RSSC projects will come to fruition. About 70 companies purchased the RFP package and 30 bids were received by the closing date in August 2018. SAEP advised on criteria to filter the 30 bidders, enabling RSSC to narrow down to a shortlist of four. SAEP will further assist RSSC to select the preferred bidder based on qualitative and quantitative criteria.

## 2.2.2 ADDITIONAL HIGHLIGHTS FOR ESWATINI

Additional activities that SAEP engaged in during Year 1 include:

- SAEP reviewed the eSwatini Water Service Corporation's (EWSC's) RFP for an Owners Engineer on a 10 MW solar power plant project. After incorporating substantial revisions submitted by SAEP, the EWSC issued the RFP. Subsequently, SAEP provided advice to EWSC during the tender evaluation process. EWSC sees in this solar power plant project a means for reducing electricity costs which make up more than 40% of the total cost of supply

## 2.3 LESOTHO

BY THE NUMBERS

**20 MW**
Pending Financial Close

Lesotho's main source of electricity is from a hydropower plant that generates about 72 MW. The country also imports electricity from Mozambique and South Africa to meet peak demands. The Lesotho Electricity Company (LEC), as the sole custodian of the electricity grid in Lesotho and with the mandate to sustainably manage the grid and its associated assets, is an important player in the Lesotho energy sector.

In Year 1, SAEP provided direct technical support to the LEC's new Board of Directors (BoD), Managing Director and Senior Management Team on the development of a Strategic Plan to transform the company, focusing on adding renewable generation and increasing connections.

### 2.3.1 TOP ACHIEVEMENTS AT A GLANCE

#### Bringing Lesotho Electricity Company's Strategic Plan Together

SAEP supported the development of the LEC's new strategic plan, designed to provide vision and guidance to the company through to 2024. The LEC has limited strategic planning capacity within the organization and therefore asked for assistance to build a five-year plan that would improve the utilities performance and help it to hit its goals. The focus of the assistance was to help the utility to build a plan that had initiatives with budgets and direct linkages to the company's fiscal strength.

*Wayne Mikutowicz, SAEP OC 2 Lead, with Thabo Nkhahle, Managing Director of LEC. Photo: SAEP*

As a first step, SAEP conducted a Strategic Plan Review Session that was held outside Maseru in March 2018. The session brought together LEC's new BoD and Senior Management Team – including LEC's newly appointed Managing Director Thabo Nkhahle – for a three-day session. The workshop helped to build consensus and agreement on LEC's mission, vision and strategic goals for the next five years. SAEP's Gender Advisor facilitated a session on the relevance and importance of gender integration in the strategic planning process and there was a general consensus to integrate fully into the plan.

SAEP subsequently facilitated Executive Committee (EXCO) and Senior Management workshops and team meetings to assist the LEC in formulating an integrated set of key objectives in support of the strategic goals as well as strategic initiatives needed to achieve the strategic objectives. SAEP supported the LEC EXCO in presenting the strategic goals and key objectives to the BoD. The BoD approved the mission, vision and value statements, together with the set of goals and objectives. SAEP also created a complete set of guidelines and a financial model to quantify the impact of

*LEC and SAEP team members during the LEC Strategic Planning session in Lesotho in March 2018. Photo: SAEP*

strategic initiatives. These tools will be available for application to similar support to utilities in the region. As a result of this support LEC Senior Management is well positioned to implement the Strategic Plan and bring improved commercial viability to the utility.

### LEC Training Needs Assessment

As part of the Strategic Planning process, SAEP identified that LEC should conduct Training Needs Assessment (TNA), in order to align their human and institutional capacity building with their strategic goals. SAEP developed a TNA tool to identify the knowledge and skills an electric utility needs to meet the new market transformation requirements and piloted its use with LEC management and staff in April 2018. The TNA identified gaps between competencies required for the evolving energy sector as compared to the available competencies in the current organization. The TNA results showed that improved management capabilities of renewables and improved gender mainstreaming competencies were both priorities for the future, so SAEP developed and proposed a training plan based on the competency gaps identified. The result of the TNA survey and the gender mainstreaming approach were presented to LEC management in August 2018 and were integrated into the Strategic Plan for implementation moving forward. SAEP will support LEC in Year 2 with their activities to address their competency gaps with a particular focus on helping LEC improve RE integration through the advancement of solar transactions.

## 2.3.2 ADDITIONAL HIGHLIGHTS FOR LESOTHO

Additional activities that SAEP engaged in during Year 1 include:

- SAEP assisted LEC in developing and issuing an RFP for ring-fencing. SAEP developed the pre-qualification document for a ring-fencing consultant and assisted LEC in drafting a letter of invitation and an application form for pre-selected bidders for the ring-fencing activity. SAEP also advised on the bidders list proposed by LEC and reviewed the initial responses. Further support on ring fencing is anticipated in Year 2, once LEC determines how they want to move forward in this effort
- Following on work that was completed under the USAID Power Africa Transactions and Reforms Program (PATRP), SAEP has continued to advise LEC on the OnePower 20 MW project. LEC and OnePower signed the PPA on 12 June 2018, and this is the first IPP structure in Lesotho. Because LEC has very limited experience working with IPPs or PPPs, the utility faced challenges in the commercial aspects of the PPA implementation particularly in how to engage with the private sector and risk allocation/mitigation. In addition, LEC's tariff expectations were influenced by the low tariffs achieved in Zambia's Scaling Solar program. SAEP and PATRP worked to manage LEC expectations in respect of realistic and commercially viable tariffs where the financial package is not part of the bidding process. In addition, PATRP and SAEP guided LEC on all aspects of the PPA, the consortium financial model, tariffs, risk placement and mitigation. SAEP will provide assistance to LEC into Year 2 for finalizing the commercial aspects of the PPA implementation, final agreement of the tariff inputs and fixing these parameters as well as the engagement with Ministry of Finance for the transaction support

## 2.4 MADAGASCAR

In 2015, the Government of Madagascar adopted the "New Energy Policy" (NEP) which sets an ambitious target to increase household access to electricity from currently 15% to 70% by 2030. The government is dedicated to using the country's RE potential and to attracting private investment to achieve this target. The Malagasy grid run by the state-owned utility, JIRAMA, covers a small portion of the country around the capital, Antananarivo, and the coastal city of Tamatov, with the remaining electricity distribution coming from micro-grids spread across the country. Given this structure and the low electrification rate because of the remoteness of some parts of Madagascar, there is significant potential to support a decentralized approach to electrification.

BY THE NUMBERS

**100 MW** Pending Financial Close

**3,911** Actual Connections

**92,600** Projected Connections

Therefore, SAEP focused Year 1 program efforts in the expanding access to off-grid solutions.

### 2.4.1 TOP ACHIEVEMENTS AT A GLANCE

#### Financial Model Helps Woman-Owned Malagasy Mini-Grid Operator Expand

SAEP worked with a woman-owned Malagasy mini-grid operator, EOSOL Madagascar, to build a robust project finance model to be used to structure projects for tender submission, identify fundraising needs, and secure private investment. Financial analysis of EOSOL's expansion projects was completed by the team in April 2018. On 1 August 2018, ADER, the Rural Electrification Agency in Madagascar, announced that EOSOL was the winning bidder for the Appel à Projets N°2 (Call for Project Number 2) tender. The tender involves building and operating mini-grids to cover 54 different villages; thus, extending electricity services for the first time to approximately 20,100 new customers. SAEP will continue to work with EOSOL as they carry out the development of these mini-grid sites.

*"SAEP's support has been significantly helpful and constructive. As a Malagasy mini-grid developer, we were pleased to work with a truly dedicated team who spent time and efforts understanding our business and the country's specificities ..."*

***Camille ANDRE-BATAILLE, EOSOL Chief Executive***

*Photo: EOSOL*

*For more details on support to EOSOL, refer to the success story section in Appendix A.*

### Leading SHS Distributor Contributes to Increased New Connections

SAEP developed and provided business analysis reports that included recommendations on sales growth, staff and agent productivity, product expansion and distribution strategies to Baobab+, the leading SHS distributor in Madagascar. Implementing the recommendations will lead – both directly and indirectly – to connecting more end-users to modern energy services, contributing to the SAEP connections goal. SAEP projects that by adopting the recommendations, Baobab+ could increase monthly sales by 24% by December 2018 and 32% by December 2019. Additionally, these changes would result in the company realizing a pre-tax margin of 20%, compared to 4% in February 2018.


*A Baobab+ sales agent provides a product demonstration to a customer. Photo: SAEP*

### 2.4.2 ADDITIONAL HIGHLIGHTS FOR MADAGASCAR

Additional activities that SAEP engaged in during Year 1 include:

- SAEP began an assessment of electrification approaches in the Sava region and the hybridization of diesel mini-grids. The rural population in Sava makes its income mainly from vanilla plantations, and therefore Sava is one of the wealthier regions in the country and residents have relatively high purchasing power. SAEP aims to assist local farmers in securing reliable and sustainable electrical energy through solar PV technology. In Year 1, SAEP collaborated with Young African Leaders Initiative (YALI) fellows based in Madagascar as part of a knowledge exchange and work skills program. The fellows conducted surveys and analysis related to affordability and willingness to pay assessments in Sava. The results of these efforts are essential for the public and private actors in designing successful electrification schemes

## 2.5 MALAWI

BY THE NUMBERS

**369 MW** Pending Financial Close

**600,000** Projected Connections

**4 LAWS/POLICIES** Drafted or Revised

Malawi has a population of around 18 million and an installed generation capacity of 363 MW, of which only 200 MW is available reliably at any given time. The country experiences severe electricity shortages, with load shedding sometimes exceeding 16 hours per day. Malawi's domestic electricity demand far exceeds supply and the deficit is expected to grow exponentially if remediation mechanisms are not put in place.

Power Africa has been actively engaged in Malawi for many years before SAEP was awarded in 2017. The Millennium Challenge Corporation (MCC) has been actively supporting sector reform and electricity infrastructure development in Malawi since 2013. In addition, the Power Africa PATRP program was also active in Malawi with an embedded advisor in ESCOM supporting the solar tender round released for 70 MW in 2017. Therefore, in Year 1 SAEP worked closely with MCC and PATRP and conducted additional sector analysis to design a Year 1 work plan that complemented pre-existing Power Africa activities.

Following on MCC and PATRP efforts to address the significant increases in demand for electricity, SAEP is working with the Government of Malawi and the private sector to move projects forward to bring power online. In addition, the Program is supporting the government, the regulator and utilities in

Malawi to create an enabling environment for public and private sector investment in the power industry.

### 2.5.1 TOP ACHIEVEMENTS AT A GLANCE

#### Mpatamanga Hydropower Project

The 308 MW Mpatamanga Hydropower Project is considered a national development priority for Malawi's energy sector, and, in Year 1, the Government of Malawi signed SAEP to advise them as they enter into a public private partnership with the International Finance Corporation (IFC) to bring the project into reality. The relationship between SAEP and the government was formalized in April 2018 through a tripartite LOC was concluded between EGENCO, the PPP Commission (PPPC) and SAEP. With SAEP's guidance, the Government of Malawi reached its first major milestone by signing a Cooperation Agreement with the IFC in August 2018. The agreement stipulates the conditions under which the IFC will work with the government to secure financing and to attract a reputable private partner. The signing of the Cooperation Agreement also opens the way towards the signing of a Joint Development Agreement (JDA) and to ultimately build and operate the power station.

*SAEP team members, Charles Eberly and Sebastian Deschler, with an ESCOM-appointed guide on a visit to the Mpatamanga project site in April 2018. Photo: SAEP*

*CEO of the PPPC, Jimmy Lipunga, signs the letter of collaboration. Photo: SAEP*

In addition, SAEP supported the government in forming the Mpatamanga Hydropower Project Task Force. The purpose of this Task Force is to facilitate the coordination of inputs and timely decision-making on the many steps that this complex project requires. Several Mpatamanga Task Force meetings have since taken place to advance the project and come to an agreement on the timeline of activities. SAEP will continue to provide technical, financial and project management advisory services to the Government of Malawi as it finalizes the JDA and ultimately moves the project to financial close.

#### Securing the land for the 25 MW Lilongwe Solar PV

With SAEP's assistance, Voltalia, a RE service provider, secured a site to develop an 18 MW Lilongwe solar PV plant, following nearly five months of delay due to land procurement issues. The original site was contested because 28 feasibility studies that predated the commencement of the Malawi solar PV tender were still active. Voltalia was one of the three preferred bidders in the tender, but their assigned landsite overlapped with one of the 28 feasibility studies. As a result, the Government of Malawi was unwilling to grant Voltalia the due land rights. The land issue was a salient hurdle to the project's progress; without land determination and the requisite access rights, the topographical and geotechnical studies could not commence. The economic impact of the project delay was quantified as US $4.4 million per month (the forgone cost of not displacing currently provisioned diesel generated power). SAEP was able to help in putting a stop to these rising costs, which would have had a ripple effect into the tariff for Malawi consumers. Over several months of discussion, SAEP advised Voltalia on their negotiations with the Malawi Investment and Trade Centre (MITC) and Ministry of Lands. SAEP maintained open communication lines with the USAID/Malawi Mission, consistently providing updates on

the situation and reinforcing a sense of urgency. Voltalia received the rights to develop the solar PV plant on a plot of land in early August 2018 due to the efforts of the USG, demonstrating the value of collaborative Power Africa action.

### SAEP Guides Energy Regulator's Tariff Reviews

A lack of cost reflective tariffs for the national utility, ESCOM, is a significant structural barrier to the growth of the power sector. As the Malawi Energy Regulatory Authority (MERA) embarked on their first tariff review after sector unbundling, SAEP guided MERA in reviewing a base tariff application by ESCOM according to the new guidelines approved in 2017. At the heart of SAEP assistance was helping to build MERA's capacity and empower them to confidently review the filing following international best practice. SAEP introduced MERA to various new practices including:

- A requirement that the ESCOM management explain to MERA personnel the "theme" behind the request for a change
- Development of data requests, which are written interrogatories that are sent to the utility with a deadline for providing responses. Data requests are used to gain clarity on the details of the application so that the MERA staff can make its independent judgments as to whether certain expenses are reasonable
- Compliance items matters that might not be able to be taken up in the context of the rate case that MERA orders the utility to do after the rate case completion. These are ordered to be done within a certain time subject to MERA approval. In this case, MERA – at the recommendation of SAEP – ordered ESCOM to provide a mechanism for taking additional funds gained due to the revaluation of assets and to use those funds solely for upgrading or expanding existing assets

The ESCOM request was for a rate increase of 60% over four years, from a level of MWK 73.23/kWh to MWK 117.3/kWh. After analysis by MERA staff the final recommendation and approved rate change was from MWK 73.23/kWh to MWK 95.15/kWh. This level of tariff covers ESCOM's reasonable costs.

## 2.5.2 ADDITIONAL HIGHLIGHTS FOR MALAWI

Additional activities that SAEP engaged in during Year 1 include:

- SAEP assisted the Energy Generation Company of Malawi (EGENCO) in developing a performance management system for use in monitoring and evaluating EGENCO's strategic plan implementation aimed at increasing capacity from 367 MW to 2,300 MW. SAEP developed realistic key performance indicators (KPIs) for each activity which will drive performance. These departmental KPIs were aggregated into a Balanced Scorecard (BSC) for each department and then aggregated for a CEO level BSC, which will provide a clear snapshot of EGENCO in achieving its performance targets. Next steps involve developing the processes and organizational changes to sustain the performance monitoring which will be tested in a year-long pilot. The process and tools developed in this assistance will also be applicable to and will be shared with other utilities in the region in Year 2

*During a meeting between SAEP and EGENCO CEO, William Liabunya, on 25 September 2018, Mr. Liabunya expressed EGENCO's appreciation with the M&E assistance SAEP has provided so far. Mr. Liabunya believes that the new KPIs and Balanced Scorecard will directly assist in measuring strategic performance and indicate the need for corrective actions.*

- Building on the MCC's work in Malawi, and with Malawi recognized as a key country for Program success, SAEP conducted a comprehensive review of the electricity sector. The resulting Malawi Power Sector Assessment[4] has been used to guide the Program's activities. The assessment

identifies challenges facing the Malawian power sector and serves as a basis for discussions with stakeholders to identify potential solutions and actions to be taken. The development of the report involved close interaction with all development partners

- ESCOM and SAEP agreed on a scope of work (SOW) and initial outline for the operations and maintenance training for the newly commissioned Phombeya–Nkhoma 400 kV power transmission line. SAEP will train ESCOM staff to operate and manage the Malawi–Mozambique interconnection scheduled for commissioning in 2020. To guide the development of the training plan, SAEP conducted a TNA with ESCOM personnel at Chichiri Power Station in Blantyre
- SAEP reviewed and provided technical feedback to another USAID program on Malawi pharmacy solar units. Once installed, the units will contribute to providing appropriate solutions to enhanced pharmaceutical storage capacity in Malawi's public health facilities and improve the country's capability to implement an effective health commodity supply chain
- SAEP hosted the seminar "Attracting IPPs into Malawi's Energy Sector" on 30 January 2018 in Lilongwe, Malawi. Participants included 18 representatives from the Ministry, MERA, EGENCO, private sector project developers and IPP operators, and the WB in attendance. The goal of the event was to 1) introduce SAEP to the Malawi stakeholder community, and 2) facilitate dialogue between public and private sector stakeholders so as increase understanding and build a common vision on the future of the sector

*Delegates pose for a photo at the Malawi IPP Seminar in January 2018. Photo: SAEP*

## 2.6 MOZAMBIQUE

BY THE NUMBERS

**1,020 MW** Pending Financial Close

**917,500** Projected Connections

Mozambique has the largest power generation potential in Southern Africa that could be harnessed from various sources, including hydro, coal and solar. Despite this great potential, power distribution in the country is severely underdeveloped leading to only 30% of the population having access to electricity. Mozambique aims to have 100% of the country electrified by 2030 and placed priority on rural electrification.

In response to Mozambique's ambitious and aggressive electrification targets, SAEP is working with the national utility Electricidade de Moçambique (EDM) to complement their electrification initiatives with the establishment of an Electrification Management Unit (EMU). In addition, SAEP continues to support EDM on transmission projects including the Temane Transmission Project (TPP), and is providing transaction advisory support to various private sector companies.

### 2.6.1 TOP ACHIEVEMENTS AT A GLANCE

#### The Temane Transmission Project: Driving Transmission Forward

EDM and Sasol, a South African energy and chemical company, are pursuing the possibility of additional power generation in Mozambique using indigenous gas resources. This has resulted in an agreement to

[4] Full report located at: https://dec.usaid.gov/dec/content/Detail.aspx?vID=47&ctID=ODVhZjk4NWQtM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTE1MDQw

develop a 400 MW generation project close to Temane in Inhambane Province using the gas from Pande and Temane gas reserves. To evacuate and transmit the power, the TPP is needed. As a requirement for World Bank support and financing, SAEP has placed a full-time Project Coordinator to manage the development of the 560 km 400 kV project. TPP will contribute to SAEP's interconnector capacity target of 1,020 MW over the life of the program, which is anticipated to reach financial close by December 2019. In Year 1, the SAEP Project Coordinator managed key activities in moving the project forward including the establishment of the TTP Project Office and TTP Special Purpose Vehicle (SPV); the review of key outputs from project consultants; facilitation of engagements between World Bank and envisaged funders to finalize an indicative project finance plan; the review and consolidation of project office budgets; and the establishment and management of the data room.

### Electrification Assistance Expected to Result in 300,000 New Connections Each Year

In Year 1, SAEP established itself as a trusted advisor to EDM through the activities like the TTP and improving community engagement (see page 17). EDM therefore quickly accepted SAEP's proposal of technical assistance to establish an Electrification Management Unit (EMU) to complement the World Bank electrification project. EDM signed an LOC in September 2018 and the two organizations are working to finalize the SOW, budget and resourcing to begin this work in Year 2. SAEP's activity will help to establish an EMU responsible for cross-cutting coordination between various departments within EDM to coordinate on-grid electrification/distribution network expansion using leading project management and electrification practices, which will allow EDM to connect 300,000 customers annually, the target outlined in Mozambique's National Electrification Plan.

### Helping SHS Distributors Map Plan for Growth and Increased Revenue

SAEP provided support to SolarWorks!, a SHS distributor planning aggressive growth of its business into a nationwide distributor. SAEP partnered with the company to design three-year strategic plan that focuses on data-driven growth and increased revenue streams, and was finalized with SolarWorks! in August 2018. The process involved conducting analyses of strategies to best utilize customer data to drive market growth, identifying complementary products and services that SolarWorks! can offer to their customer base and recommending partnership opportunities for the company, all increasing the company's commercial viability. While SolarWorks! hasn't finalized their sales projections over the next three years, they expect to sell approximately 40,000 systems before March 2021.

*A hut in rural Mozambique powered by SolarWorks! products. Photo: SAEP*

## 2.6.2 ADDITIONAL HIGHLIGHTS FOR MOZAMBIQUE

Additional activities that SAEP engaged in during Year 1 include:

- SAEP partnered with USAID's Sector Reform and Utility Commercialization (SRUC) program to finalize EDM's Community Engagement Strategy as part of a series of initiatives to improve EDM commercial viability. The Community Engagement Strategy will help EDM to address customer

issues, reduce non-technical losses, and add new connections and will be rolled-out through the Electrification Management Unit in Year 2. The Community Engagement Strategy development was divided into two stages: 1) developing a strategy for EDM to work in the communities, and 2) developing an implementation roadmap that focuses on how EDM can better serve and engage their customers through a two-way outreach strategy. The first stage included field assessments, holding interviews with EDM management and organizing four community workshops to learn about opportunities and suggestions on working with the local villages. Information received from these activities was synthesized into the strategy. As a result of these interviews, for the first time EDM heard the opinions of the communities and integrated them directly into their strategy and operations

- In July 2018, SAEP began providing support to EleQtra, the developer of the 120 MW Namaacha Wind Project. Namaacha has an extremely good wind resource and could be Mozambique's first wind PPA. SAEP built the financial model (with considerations of local tax incentives, PPP profit sharing, licensing costs and fees, mezzanine debt) and it was finalized in October 2018. The outputs/results obtained from the financial modelling exercise will then feed into the Project Investment Memo (PIM), which is needed in March 2019 for presentation to potential investors. The developer is looking to split off a 30 MW component to be submitted under GET FiT and subsequently develop the project in tranches of 30 MW and 60 MW. The project is currently in feasibility stage, with US $2 million in United States Trade and Development Agency (USTDA) grants and US $400,000 from AfDB for use during the 2018 calendar year. The developer is also looking to launch an RFP for an equity partner in the next few months

## 2.7 NAMIBIA

BY THE NUMBERS

**40,000**
Projected Connections

The power sector in Namibia has undergone several reforms such as the consolidation of more than 70 distributors into five regional electricity distribution companies (REDs), the establishment of transparent tariff setting procedures and the Renewable Energy Feed-in Tariffs (REFIT) program, all overseen by the sector regulator, the Electricity Control Board (ECB). While the country's generation mix is comprised primarily of hydropower and solar projects, the majority of electricity is imported, through various contracts from South Africa's Eskom and SAPP.

In Namibia, SAEP aims to provide technical assistance support to various public and private stakeholders, including the ECB, NamPower, and the Ministry of Mines and Energy (MME). While several generation projects have come online in the past few years through the REFIT program, Namibia – through NamPower – continues to look at opportunities for increasing baseload generation. As the selection for this baseload generation advances, SAEP has offered assistance to the Government of Namibia to move these transactions forward. Separately, Namibia is also working to try to electrify the remaining population, both in peri-urban settings and rural areas that still do not have access to electricity. As imported generation prices increase, this puts a strain on the ability of the REDs to extend affordable access.

## 2.7.1 TOP ACHIEVEMENTS AT A GLANCE

### Partnering with the City of Windhoek for Electrification

The City of Windhoek (CoW) has a large number of informal settlements in which up to 30% of the city's population resides. The CoW Transformational Strategic Plan (2017 – 2022) aims to improve service delivery for the residents of the city including electrification stating that "*in aiming for the progressive upgrade of informal settlements, the City intends to achieve ongoing improvement in services, public space and tenure for informal settlement households as the City formalizes its top structures*."

*Windhoek's informal settlements have limited access to the grid. The Program is working with the city to develop an approach to connect households in informal settlements to electricity. Photo: SAEP*

Given the complexity of electrifying informal settlements, the CoW asked SAEP to assess the technology and financing options available for electrifying its peri-urban settlements. This assessment will help the CoW Electricity Division to accelerate their electrification rate and improve their processes to plan to electrify 5,000 households that have been budgeted for by 2022 and to develop a plan to electrify approximately 35,000 additional households once funding has been allocated.

The CoW council approved the LOC in August 2018 defining SAEP's support and the CoW's obligations, and initial analysis has kicked-off including a detailed site visit and definition of the territories and categories for electrification.

### Advancing Namibia's Distributed Generation through Battery Storage and Mini-Grids

The Central North Regional Electricity Distributor (CENORED) is facing increasing NamPower peak demand charges which are limiting CENORED's ability to provide affordable electricity to its service territory. CENORED asked SAEP to support analysis on the potential use of battery storage to manage solar variability and reduce energy costs. CENORED plans to use solar energy to develop distributed generation capacity within its network, and is exploring ways to add battery storage to one of its six solar PV sites currently under consideration. SAEP developed a cost-benefit analysis of the use of utility-scale battery storage at each of the identified solar sites. The initial analysis highlights potential benefits, and SAEP will support CENORED to conduct a more targeted analysis and a market assessment for one site that could lead into a CENORED market inquiry for battery storage services.

*Some of the CENORED engineers attending SAEP's mini-grid training in July 2018. Photo: SAEP*

In addition, SAEP trained 14 members of the CENORED management and technical teams on mini-grids in July 2018. The aim of the training was to enhance their understanding of the

technical and financial aspects of mini-grids for improved management of their mini-grid assets. The training helped to increase the CENORED team's knowledge of vRE systems and battery storage improving operation of current assets, as well as enhanced their input into and ownership of the battery storage project.

### 2.7.2 ADDITIONAL HIGHLIGHTS FOR NAMIBIA

Additional activities that SAEP engaged in during Year 1 include:

- ECB Board approved recommendations developed by SAEP on its role in the development and implementation of Namibia's Integrated Resource Plan (IRP). The essence of the recommendations was that the ECB should not both develop the IRP and monitor its implementation. Thus, as a regulatory authority better positioned for the latter role, ECB will not be involved in the development of the IRP in the future

## 2.8 SOUTH AFRICA

BY THE NUMBERS

**2,130.38 MW** Reached Financial Close

**3,423 MW** Pending Financial Close

South Africa has favorable conditions for solar and wind power generation, but these sources currently only contribute about 3% of energy supplied to the national grid. The need to diversify and strengthen South Africa's energy mix and to increase economic growth prompted the South African government in 2010 to create the Renewable Energy Independent Power Producer Procurement (REIPPP) program. The program, managed by the IPP Office, competitively procures power from the private RE market.

As the largest economy in Southern Africa and a critical country in regional integration, SAEP's work in South Africa has been focused on areas where essential technical assistance can provide additive value and drive change across the region. The main focus of SAEP support in Year 1 has been primarily in assisting the South African Department of Energy's IPP Office with the procurement of new RE generation capacity.

### 2.8.1 TOP ACHIEVEMENTS AT A GLANCE

#### SAEP Supports Financial Close of 25 Renewable Energy Projects under REIPPP

SAEP made a significant contribution to the IPP Office's Renewable Energy Independent Power Producer Procurement (REIPPP) program by supporting the advancement of 27 renewable energy IPP projects received as part of Bid Windows 3.5 and 4.0. Responding to the IPP Office's request for support, SAEP provided training to REIPPP staff on how to conduct initial due diligence work specific to the technical/engineering and the economic development components of the bids.

SAEP support was essential for gaining consensus between the involved parties, resulting in all 27 IPP projects reaching commercial close in March 2018, and 25 of the 27 projects reaching financial close by August 2018. As the 25 projects move forward, in the coming five years South Africa will see US $3.9 billion in private sector investment and 52,000 new jobs created and will realize over 2,000 megawatts of new clean generation to support much needed economic growth. South Africa's Northern Cape province will receive the majority of the investment with 13 new wind and solar PV projects, followed

*SAEP support will result in nearly **US $4 billion in new investments** into South Africa's energy sector, creating close to **52,000 new jobs** and generating over **2,000 MW** of energy.*

by the Eastern Cape with four new wind projects, together with the North West Province also having four new solar PV projects.

### 2.8.2 ADDITIONAL HIGHLIGHTS FOR SOUTH AFRICA

Additional activities that SAEP engaged in during Year 1 include:

- South Africa's national utility, Eskom, is currently the only entity licensed to import and export power on South Africa's interconnectors. IPPs have engaged both Eskom and the National Energy Regulator of South Africa (NERSA) to discuss their potential role in cross-border trading because in SAPP's open market structure IPPs should be able to export. However, due to a lack of rules and clear regulations on licensing at the national level, progress has not been made. Through engagements with NERSA during Year 1, NERSA agreed that SAEP will assist in the development of cross-border rules and regulations that will enable IPPs in South Africa to export power to the region. This will not only unlock tremendous regional opportunities to increase efficient optimization of generation, but could have positive social and financial economic impacts in South Africa
- During Year 1, SAEP developed a pipeline of 340 MW of projects spanning gas, cogeneration, biomass, solar and wind. Legal, regulatory and commercial targeted assistance and support were provided to six developers and two municipal utilities. Three projects are worth particular mention:
    - SAEP provided commercial assistance in developing a term sheet for the Matjhabeng Solar 1 Project (the first 66 MW phase of a three-phase 200 MW ground solar project in the Free State). It is the first non-REIPPPP large-scale solar power project in the country under an innovative PPP with municipal offtake backed by National Treasury. SAEP has introduced Sunelex, an empowered junior South African developer, to four senior developers active in South Africa, each with portfolios of over 1,000 MW of assets. The winning senior developer will provide equity and the debt for the project and provide funds to push the project over the line. Sunelex is expected to reach financial close with the first 66 MW phase in quarter 1 of 2019. The following two phases will reach financial close in 2020 and 2021, respectively
    - SAEP is providing commercial assistance and legal advisory support to the West Rand Development Agency to pilot a 10 MW urban solar farm concept. When the project model is successful and a PPA agreement is finalized, project developers could replicate the model across multiple sites across the country helping to address some of South Africa's municipality challenges
    - SAEP is evaluating business models and financial structure options for the City of Cape Town to implement a 10 MW rooftop PV pilot across 2,000 middle- to high-income residential customers. The objective of the pilot is to create a legal, regulatory and investment model conducive to rolling out rooftop PV across its customer base without negatively impacting municipal revenues from selling electricity. The analysis will be supported by the USAID South Africa LEDs Program. The City of Cape Town Mayoral Committee approved the activity in Year 1 and the team has been working to finalize the scope for initial analysis to be completed over the first quarter of Year 2

## 2.9 ZAMBIA

The Government of Zambia declared its commitment to universal electricity access for all Zambians by 2030. To achieve this goal, Zambia must – among other initiatives – increase its power generation capacity as well as develop a strategy to bring power to millions of unelectrified households.

BY THE NUMBERS

**551 MW** Pending Financial Close

**60,501** Actual Connections

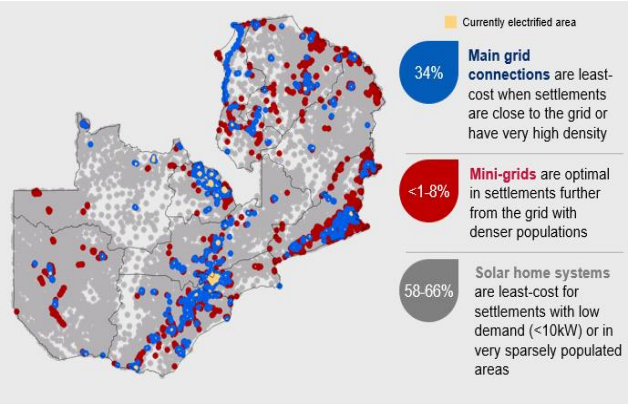
**918,275** Projected Connections

SAEP builds on the findings of the Zambia Power Sector Assessment and least-cost electrification geospatial model. During the first half of the year, SAEP focused on targeting on- and off-grid connections in Zambia and building a pipeline of more than 500 MW of potential hydro, solar, and wind projects. During the latter half of Year 1, SAEP focused on off-grid support to the public and private sector, which included the establishment of the public sector-led Off-Grid Task Force and providing technical assistance to the private-sector led Solar Industry Association of Zambia (SIAZ). In addition, SAEP's transaction advisors collaborated with other cooperating partners (CPs) to advance procurement programs such as KfW's GET Fit, IFC's Scaling Solar and the IFC/EU mini-grid program.

### 2.9.1 TOP ACHIEVEMENTS AT A GLANCE

#### Geospatial Tool to Guide the Zambian Energy Sector

In an effort to fast-track the introduction of off grid solutions into the national electrification mix, SAEP completed a geospatial model that identifies the least-cost technology for non-electrified households located throughout the country. The model shows that development of mini-grids and installation of SHS can play a significant role in electrification for a substantial portion of the rural population, by replacing comparatively expensive option of extending the grid. Completed in March 2018, the tool is being used by Zambia's Rural Electrification Authority (REA), the Ministry of Energy and the private sector to plan and implement rural electrification projects. On 20 March 2018, SAEP held a training workshop hosting 55 participants from the Government of Zambia, CPs and the private sector to disseminate the model for use in future electrification planning. In addition, SAEP has provided individual training and additional support upon request. The geospatial model tool will also feed into the World Bank's assistance to the Ministry of Energy on the Electrification Master Plan as well as the IFC's mini-grid activities. The tool is open source and available to the public.5 To date, SAEP has received over 30 requests from academia, the private sector and government to use the tool and underlying data sets to further their work. In particular, the model has been an important input to the work SAEP has provided to SIAZ and its members on route-to-market strategies for SHS expansion across Zambia.




*For more details on the geospatial model, refer to the success story section in Appendix A.*

[5] Documentation for the geospatial model can be found at: https://pdf.usaid.gov/pdf_docs/PA00T2JC.pdf

## Organizing Zambian SHS Companies to Expand Their Market Reach

Success of solar project developers in Zambian market has been slowed due to the absence of a central body capable of advocating on their behalf with the government to improve the enabling environment for off grid technologies. In response, SAEP assisted with the formation and official registration of the Solar Industry Association of Zambia (SIAZ). SIAZ has already has 20 solar developers as members, has elected its governing committee and formally registered with the government. The association presents a single point of contact for solar providers, shares industry-specific information, drives sector-wide initiatives, advocates with the government of Zambia on behalf of members, with ongoing support from SAEP.

*SIAZ members discussing updates to and highlights from the geospatial model and results from a consumer survey SAEP conducted. Photo: SAEP*

Over the past several months SIAZ members have met several times to discuss matters of common interest including equipment standards and the taxation regime for solar products and equipment. SAEP supported SIAZ members to refine the geospatial model database, thereby the model's usefulness. SAEP also helped SIAZ member companies with route-to-market analysis by integrating demographic data and new market locations. The aim was to help the companies identify next expansion locations more efficiently and with a more data-driven approach. SAEP's work in the off-grid space – where an expected 136,000 new connections per annum will be needed in the coming decade – contributes to the Government of Zambia's goal of having 66% of the population with access to power by 2030.


*Photo: Power Africa*

## Building Financial Models to Calculate Tariffs for Mini Hydro

SAEP provided critical technical support to the Zambian Energy Regulatory Board (ERB) to develop feed-in tariffs for mini-hydro projects. Building on previous work supported by USAID under the Trade

Hub project, SAEP helped the ERB to model GET FiT tariffs, as well as to facilitate stakeholder discussions across the Zambian electricity sector. Following ERB approval of the methodology, inputs and financial model developed in collaboration with SAEP, the ERB was able to calculate feed-in tariffs for the 100 MW-window of mini-hydros expected to be procured during Round Two of KfW's Zambia GET FiT program. KfW is working closely with the Government of Zambia to announce the feed-in tariffs after feedback has been collected from stakeholders; the procurement round should be launched in the first half of FY19. This activity will result in Zambia having more options for rural electrification and the development of underutilized small and medium sized hydropower.

### 2.9.2 ADDITIONAL HIGHLIGHTS FOR ZAMBIA

Additional activities that SAEP engaged in during Year 1 include:

- With Zambia recognized as a key country or Program success, SAEP conducted a comprehensive review of the electricity sector. The resulting Zambia Sector Assessment has been used to guide the Program's activities. The assessment identifies challenges facing the Zambian power sector and serves as a basis for discussions with stakeholders to identify potential solutions and actions to be taken. The development of the report involved close interaction with all development partners. The report has been well received and is being used by the Zambian government, Zambia Development Agency and CPs
- The regular and ongoing changeover of regulatory board members and the poor on-boarding of new members often times results in a board performing below par. SAEP trained the newly appointed ERB board members on roles and responsibilities as well as Business Regulatory Review Agency (BRRA) compliance issues. In addition, through discussion with the BRRA, SAEP was able to assist the ERB in avoiding a contentious and time-consuming modification of its rate case procedures by confirming that the existing procedures were compliant with BRRA requirements
- SAEP provided an Embedded Technical Advisor to ZESCO to assist the utility across a number of areas:
    - To improve ZESCO's operational performance, SAEP organized various capacity building and training workshops for employees from the Systems Operations, Generation Development and Business Development Units
    - Assisted ZESCO to resolve their customer backlog issue of 32,000 customers through an assessment of financing options
    - SAEP guided ZESCO on refining their existing project management policy
- Regular and constructing engagement amongst power sector stakeholders is essential if incremental and lasting change is to be realized. Towards this end, SAEP took a leading role in shaping the Off-grid Task Force in Zambia. Led by the Government of Zambia, with support and involvement from CPs and a joint secretariat with the Renewable Energy and Energy Efficiency Partnership (REEEP), the Task Force brings together stakeholder representatives who will identify and offer solutions to hurdles standing in the way of rapid rollout of off-grid electrification solutions. The implementation of value-added tax (VAT) exemptions on SHS components was one of the first activities SAEP supported. The Ministry of Energy in Zambia has submitted proposals on import duty and VAT exemptions to the Ministry of Finance

- As part of the off-grid support in Zambia, SAEP has conducted an affordability and willingness-to-pay assessment. The assessment was multipronged – it included a text and in-person survey. These survey results will be supplemented by additional surveys collected by the Peace Corps. The initial survey results have been completed and findings are undergoing a process of refinement through stakeholder engagements. This information will feed-into work being undertaken by the Off-grid Task Force on consumer affordability, a priority highlighted by the private sector to be addressed by the Task Force

*Survey team interviewing for the consumer affordability survey: a brick layer who uses a solar powered radio in Lushaya, Copperbelt Province, Zambia in May 2018. Photo: SAEP*

- Zambia's Water Resource Management Authority (WARMA) asked SAEP to support the 247 MW Kalungwishi Hydropower Project. WARMA will lead a catchment study and develop a resource management plan to determine how much stress the river system can take, in light of the various developments planned in the Kalungwishi Basin. WARMA has requested that SAEP handle the program management of the catchment study, including grant applications for study funding, contributing to the TOR outlining the scope of the study, overseeing procurement of technical services to conduct the study, and ensuring the study is completed on time and in budget. To this end, SAEP hosted a roundtable discussion, during the International Water Stewardship Programme (IWaSP) Regional Conference in Nairobi, Kenya from 5 – 7 June 2018 to create a roadmap to the catchment study
- During Year 1, SAEP provided targeted transaction support to a pipeline of 250 MW of Zambian wind projects:
    - SAEP is advising AMEA Power, a Dubai-based developer of a 100 MW wind project in Zambia. AMEA is an example of an early stage development project where the developer engaged SAEP before beginning any of their development works and, as a result of that consultation, has expedited their development process. AMEA was able to get a Letter of Exception from the Zambia Public Procurement Authority (ZPPA) in June 2018, granting them exclusivity to their feasibility study and preventing it from being tendered out to market as the country's procurement law requires. The letter typically takes anything between two and six months to secure due to the lack of clear guidelines/protocols, but AMEA was able to get theirs in under two months thanks to SAEP's advisory services. AMEA's Regional Manager for Southern Africa has been working closely with SAEP's Zambia Country Manager to progress the project; they both met with the Principal Secretary of Energy in mid-July 2018 to kick-start the activities towards the wind feasibility study
    - SAEP has supported the developers of the 150 MW Unika wind farm.by providing a series of market intelligence briefs on the Zambian market with particular focus on the probability of securing desired government guarantees and an assessment on ZESCO's current credit situation

## 2.10 REGIONAL

Two out of three people in sub-Saharan Africa do not have access to electricity. Increased access to affordable and reliable energy supply across Southern Africa requires greater cooperation across borders to ensure power can move freely and securely. With efficient systems in place, greater volumes of electricity can be traded at lower costs to governments and consumers.

BY THE NUMBERS

LAW/POLICY
Drafted or Revised

In Year 1, SAEP engaged various regional and cross-border stakeholders so as to build strong relationships and to better understand the needs of counterparts. As a result of the initial engagements with SADC, the Regional Electricity Regulators Association (RERA), SAPP, and the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE), SAEP designed and delivered a range of activities that increased understanding of the region as a whole as well as what is needed for the individual institutions to meet their mandates. An overview of these activities with SADC, SAPP and RERA follows below.

### 2.10.1 TOP ACHIEVEMENTS AT A GLANCE

#### Support to SADC

In an attempt to better understand what role regional gas could play in increasing power availability in the Southern Africa, SAEP developed and published the "Power Africa Natural Gas Roadmap for Southern Africa".[6] The Roadmap examines the Southern African region's potential for gas-to-power initiatives, assesses the gas demand across various sectors, and looks at the regional trade potential between four countries: Botswana, Mozambique, Namibia, and South Africa. The report was released in parallel with the PATRP "Power Africa Gas Roadmap to 2030".[7] SAEP's Roadmap concluded that, while the region is in need of developing the natural gas industry, bringing gas-to-power projects to financial close before March 2022[8] is highly unlikely. As a result, SAEP expects to strengthening and harmonizing the regional enabling environment for gas to power projects while helping SADC to pursue a regional gas master plan for Southern Africa.


The SADC Protocol on Energy is quite dated, having not been updated since its ratification in 1996. Since that time, SADC has developed and adopted several other documents[9] that speak on energy-related issues. Recognizing that the Protocol needed to be updated to become aligned with the other governing SADC documents, SADC Secretariat requested SAEP complete a review and update of the SADC Protocol on Energy and provide proposed amendments that allow for the block of documents to be fully aligned. In Year 1, SAEP completed a review and submitted proposed amendments for SADC's consideration. The conceptual framework of the revised Protocol refers to the findings and recommendations in the development of other regional strategies. The update reflects the current achievements and future goals of the Member States towards regional energy sector harmonization.

[6] Full report located at: https://www.usaid.gov/sites/default/files/documents/1860/Power-Africa-Gas-Roadmap_Final_508_Compliant.pdf
[7] Full report located at: https://www.usaid.gov/sites/default/files/documents/1860/Power_Africa_Gas_Roadmap_2030.pdf
[8] The current end date for the SAEP contract
[9] These include the SADC Industrialisation Strategy and Roadmap, the SADC Energy Sector Plan of the Regional Infrastructure Development Master Plan, the SADC Regional Energy Access Strategy and Action Plan, the SADC Renewable Energy and Energy Efficiency Strategy and Action Plan, and the SADC Regional Strategy Development Plan

SADC and SAEP are now preparing for a November 2018 workshop with SADC energy and legal experts whose comments and inputs are required in order to finalize of the updated Protocol.

SAEP participated in the SADC Energy Thematic Group (ETG) meetings in Gaborone on October 2017 and April 2018. The outcome was very positive, which confirms SADC's developing/CPs' commitment to assist SADC. On both occasions, a parallel meeting was also held where SAEP reported on support that has been provided to SAPP, SADC, SACREE and RERA and gave logistical as well as secretarial support to the April 2018 ETG meeting. Following this meeting, SAEP met with SADC, SAPP, SACREE and RERA, where the formation of a SAEP Advisory Committee was agreed upon. The purpose of the Advisory Committee will be to guide SAEP cross-cutting initiatives and ensure harmonized implementation.

*Stakeholders in discussions at the ETG meetings in Gaborone, Botswana. Photo: SAEP*

## Support to SAPP

SAEP's assistance in moderated a day-long meeting with the SAPP EXCO held on 21 March 2018. SAEP presented thought-provoking and robust assessment on key issues including the strengthening of the regional market, regulation, communication strategies and the evolving state of utilities and how SAPP utilities can stay relevant. This provided a platform for open and intense discussions among the SAPP utility CEOs on the impact on the regional market, their utility and country of operation. SAPP was excited to be working with SAEP as they strive to integrate the ideas discussed into their new operating model.

To improve their ability to effectively and efficiently manage ever-increasing volumes of power traded in the competitive market, SAPP staff needed to improve their technical understanding of how balancing markets are established and operated. SAEP facilitated the workshop "Balancing Markets and Managing Ancillaries" in Johannesburg, South Africa in August 2018. SAEP conducted the three-day training in collaboration with NordPool, a Scandinavian power trading company. As part of the training, SAEP's Energy Markets Expert developed a model for SAPP to assist in balancing market training. It is a tool to simulate the scheduling and dispatch processes (balancing supply and demand) to gain insight into the operation of, and expectations from, a balancing market. The model is a simplified representation of the SAPP power system and should only be used as a training aid. The model was shared with 17 workshop participants attending from 12 different SAPP member utilities and two private SAPP member utilities. It is anticipated that the activity will assist in increasing the trade volumes in the SAPP spot market and improve the efficiency of the energy imbalances throughout Southern Africa.

*The Balancing and Ancillary Markets training was held in Johannesburg, South Africa in August 2018. Photo: SAEP*

## Support to RERA

Unlike many regions of the world, the SADC region at present does not have a uniform and standard set of indicators against which the utilities of Southern Africa can be measured and evaluated. Recognizing the importance of such indicators to national regulators, RERA requested SAEP assistance in the development of a set of KPIs appropriate to the Southern Africa. SAEP worked with RERA member regulators to develop a robust and consistent set of 30 KPIs that will be used by RERA to establish regional comparisons of utility performance. This comparative analysis across Southern African utilities is important for improving utility accountability and enhancing utility governance. SAEP worked with federal regulators to develop a KPI reporting framework and worked with utilities to develop benchmarking tables and reporting timeframes. Once the KPI process is established between all stakeholders, it will be provided on a regular basis under RERA direction, with SAPP and SADC participation in the publication of the KPIs. The expected impact will be to improve public support for tariff and utility reform by providing reporting on service quality and financial performance.

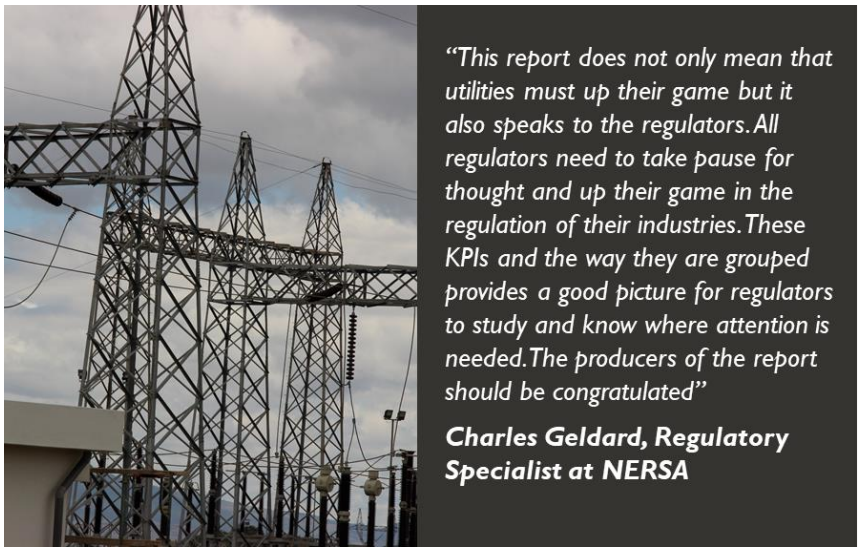



*Photo: Power Africa*

For RERA to methodically move from being an association to being a proper regional regulatory authority they needed a strategic plan that supports this transition. In response to RERA's request, SAEP provided RERA with a framework for developing its strategic plan and assisted with facilitating its strategic planning workshop. SAEP will continue providing strategic plan development support to RERA into Year 2 as the institution finalizes its plan. The assistance affords SAEP staff a unique perspective into the structure, operations and challenges facing such an organization, and helps cement SAEP's position as "trusted advisor".

In order to increase RERA's stature in the region as the leading authority on regulatory issues, SAEP provided significant support to RERA in both the organization and execution of the RERA Annual Conference held in Livingstone, Zambia in November 2017. In preparation, the Executive Director of RERA met with SAEP to develop the agenda, which included presentations and facilitated discussions by several SAEP team members.


*One of the presentations given by OC1 Lead, David Jankofsky, at the 2017 RERA Conference. Photo: SAEP*

# 3 PROGRAM MANAGEMENT, FINANCE AND OPERATIONS

In Year 1, SAEP established a centralized Program Management Office (PMO) as an organizing body to integrate, facilitate and coordinate the core and cross-cutting program functions, such as knowledge management, communications, M&E, environmental monitoring and gender integration. Additionally, SAEP's Finance and Operations (F&O) Team oversaw the Program's financial management, HR management and operations support, including procurement, office administration, security, and logistical coordination. Through the PMO and F&O teams' close coordination with the Deloitte Home Office, SAEP has successfully moved quickly from initial team mobilization to stakeholder engagement and work plan development to technical assistance delivery.

**PMO & Finance/Operations Highlights**

- Set-up the Pretoria and Zambia offices
- Hired and onboarded Program management and key support staff
- Finalized core subcontracts
- Developed and submitted various USAID deliverables such as the Year 1 and 2 Work Plans, status reports and M&E tools and processes
- Completed a comprehensive Communications Strategy Plan that adheres to USAID branding and visibility guidelines
- Developed various PR material and communication tools to promote SAEP
- Continuously monitored the Program's performance by developing tools such as the Performance Management and Evaluation Plan (PMEP)
- Operationalized SAEP's environmental compliance monitoring system
- Integrated gender considerations into outcome activities

## 3.1 SAEP PROGRAM MANAGEMENT OFFICE

During Year 1, SAEP formed and staffed the PMO. Working with program technical teams, country managers and M&E Specialist, the PMO has been capturing and archiving outputs and deliverables, and feeding relevant data and insights back into management and reporting functions. This is essential for traceability and accountability purposes as the Program continues to implement complex and multifaceted interventions invoking various documentation requirements. The following sections provides an overview of major PMO deliverables from Year 1:

**SAEP Quick Start Plan.** To facility Program start-up, SAEP developed a Quick Start Plan that laid out plans on how we would to stand up Program operations, how we would engage stakeholders as we pursued our Year 1 Work Plan development, and which activities SAEP would begin technical delivery immediately. The Quick Start Plan proved to be instrumental as a tool to ensure clear and constant communications existed between the SAEP delivery team and USAID/Southern Africa.

**SAEP Year 1 Work Plan.** While implementing the SAEP Quick Start Plan and continuing to staff up the program, SAEP kicked off the Year 1 Work Planning Process in June 2017 where key SAEP staff were brought to Gaborone to participate in a two-day off-site event. Taking into account inputs from counterpart organizations, the Power Africa Coordinators Office, and various US Embassy staff members and USAID Mission staff members located throughout the region, a draft work plan was presented to USAID/Southern Africa in August 2017 and approved by the SAEP COR in September 2017.

**SAEP Year 2 Work Plan.** The Year 2 Work Plan planning process was kicked-off in March 2018 where all SAEP staff were brought to Pretoria to participate in a three-day off-site event. In addition to reviewing and finalizing the Year 1 Work Plan, sessions were held on how Year 1 successes and lessons learned would be used to help inform the Year 2 Work Plan. A final draft of the Year 2 Work Plan was provided to USAID/Southern Africa in quarter four of FY18.

**The Performance Management and Evaluation Plan.** The Performance Management and Evaluation Pan (PMEP) PMEP was submitted to USAID on 19 July 2017 and has been continuously reviewed and updated in consultation with the COR since. The plan helps to guide the SAEP implementation team to monitor activities, evaluate the performance of the program and use lessons learned to improve program performance. The PMEP includes a learning component and builds off the Power Africa Monitoring, Evaluation and Learning (MEL) Plan. The SAEP PMEP proposes indicators against each of the expected program outcomes. It also describes the processes that we will use to perform monitoring and evaluation (M&E) throughout the life of the program. Each indicator has a Performance Indicator Reference Sheet (PIRS) located in Annex 3 and Annex 4 of the PMEP. There is also a Performance Indicator Targets (PIT) table, which includes the indicators and targets for the activity.

*Craig VanDevelde, SAEP Chief of Party, speaks during the SAEP Year 1 Mid-Year Review session in South Africa. March 2018. Photo: SAEP*

**The Environmental Mitigation and Monitoring Plan (EMMP) / Catalyzing Local Opportunities Fund (CLOF).** The EMMP and the CLOF Management Plan was submitted to USAID on 19 July 2017. The SAEP EMMP is required for USAID under 22CFR216 documentation governing USAID development assistance. During the SAEP design phase, USAID completed an Initial Environmental Examination (IEE), which ensures protection of the environment and reduces environmental impacts of the Program. This EMMP ensures that the ADS 204.3 requirements for incorporating and monitoring appropriate mitigation measures is incorporated into all program activity. This EMMP also specifies how IEE conditions and mitigation measures will be implemented and monitored. Refer to point 3.1.4 for a detailed overview.

**Gender Action Plan.** The Gender Action Plan was submitted to USAID on 2 August 2017. This Action Plan creates a roadmap for the practical implementation of SAEP's gender equality goal. It lays out the gender equality goals for SAEP, the overarching high-level entry points for gender mainstreaming across the contract, and the specific implementation activities for each program outcome. The Action Plan is designed so that it aligns to planned program activities, is catalytic of the program goals and presents cost-effective solutions. Refer to point 3.1.5 for a detailed overview.

**The Grants Manual.** The SAEP Grants Manual was submitted to USAID on 19 July 2017. The manual presents the processes and procedures that SAEP follows when executing grants under the USAID technical assistance contract that authorize grants under contract pursuant to USAID automated directives system. The manual has four sections; each section is designed with a particular audience in mind and those sections pertaining to potential applications and to recipients are designed to stand alone. The manual is a single source of reference for policies and guidelines to be used for solicitation, negotiation, award and management of grants issued under the USAID contract awards. Refer to point 3.2.2 for more information.

**The Communication Strategy[10].** SAEP's communication strategy was submitted to USAID on 20 July 2017. The strategy has helped in providing overarching direction and guidelines for designing, developing and implementing communication activities to inform stakeholders about successes achieved, to engage stakeholders in planned activities to foster continued support and to communicate the USG's

[10] Full Communication Strategy is located at: https://pdf.usaid.gov/pdf_docs/PA00SWZF.pdf

support – through USAID and the Power Africa Initiative – for improved access to energy in Southern Africa.

**Quarterly Program Performance Reports.** Since Program start in March 2017, five quarterly reports were compiled and submitted to USAID. The quarterly report for quarter four of FY18 forms part of this annual report.

**Biweekly Status Report.** SAEP has been reporting on activities and outcomes every two weeks since 12 April 2017. The template for this reporting has been iteratively improved over the course of Q1 and Q2 of FY17 and finalized since then, and the report itself has evolved into being instrumental in keeping USAID and the wider group of Power Africa team members informed on SAEP's work by outcome and/or country.

**Power Africa Field Update.** SAEP provided inputs to the Power Africa updates report sent out by the Power Africa Coordinators Office every four months. The Field Update gives an overview of the work that goes into transforming the African continent's energy sector. It is the cornerstone of the Coordinator's Update that gets distributed to a much wider audience in the USG and is read by many key decision makers in other USG agencies who need to be informed of Power Africa's key successes and challenges.

**Trip Reports.** The team provided feedback on all duty travel by drafting reports after trips, which are shared with USAID and Power Africa in a continued attempt to ensure uniform access to information is available to as wide a group as possible.

**Communication Deliverables.** Various communication tools were developed and implemented such as program and country one-pagers and success story write-ups. Refer to point 3.1.2 for a detailed overview.

### 3.1.1 STAKEHOLDER ENGAGEMENT

During Year 1, the team implemented and built on various engagement activities. Discussions about SAEP and its cross-cutting components set the stage for sustained collaboration, coordination and knowledge-sharing with various stakeholders.

SAEP has succeeded in employing a clear, inclusive, and adaptable Communications Strategy to convey SAEP's technical strategy, value proposition, and approach to stakeholders, including, but not limited to: ministries, utilities, regulators, multilaterals, USG agencies, NGOs and the general public. In Year 1, SAEP solicited participation from these stakeholders to refine programming strategy and prioritize high-impact interventions that best address stakeholders' needs.

SAEP participated in the SADC ETG meetings in Gaborone in October 2017 and April 2018. On both occasions, a parallel meeting was held where SAEP reported on support that had been provided to SAPP, SADC, SACREE and RERA. Following this meeting, SAEP met with SADC, SAPP, SARCEE and RERA, where the formation of a SAEP Advisory Committee was agreed upon. The purpose of the Advisory Committee will be to guide SAEP cross-cutting initiatives and ensure harmonized implementation.

The recent Year 2 Work Plan session SAEP hosted with CPs at the SAEP office in Lusaka on 21 August 2018. The session was attended by over 20 participants representing all major CPs in Zambia. As a result of the interaction, SAEP was able to identify activities in the Year 2 Work Plan that would possibly be best served as collaborative efforts between SAEP and the partners.

Further breakdowns of stakeholder engagement can be found in the country sections above.

## 3.1.2 COMMUNICATIONS AND OUTREACH

In Year 1, SAEP focused on laying the foundation for the Program and communicating the Program's purpose, scope and goals to gain buy-in from counterparts and industry actors essential for driving change in the Southern African energy sector. SAEP focused on developing templates and implementing processes for Program communications and ensuring impact resulting from activity delivery is appropriately conveyed. The following is an overview of major activities and outcomes from Year 1:

*Former Zambian Minister of Energy, David Mabumba, speaking at the SAEP Launch event in Livingstone, Zambia in November 2017. Photo: SAEP*

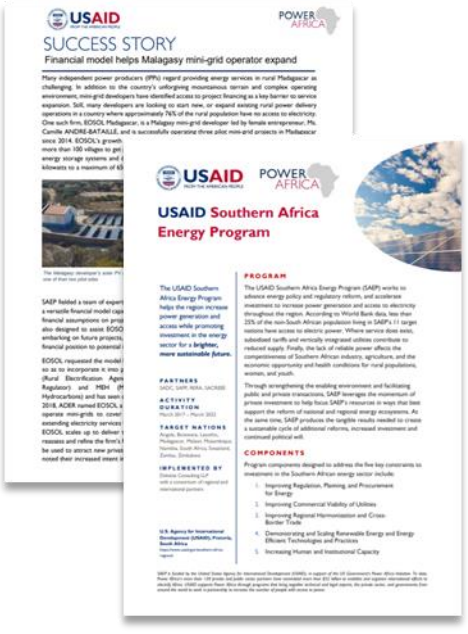
**Branding and Marking Plan and Communication Strategy.** During the Program's first quarter, the team worked to complete the Branding and Marking Plan and the Communication Strategy that were both submitted to USAID during this period.

**SAEP Launch in Zambia.** The November 2017 official SAEP launch in Zambia attracted high-level government officials and energy stakeholders. The then Zambian Minister of Energy, David Mabumba, held an opening address. In preparation, SAEP generated event material including comprehensive lists of Zambia media contacts, invitations, draft talking points for speakers and a press release.

**Success Stories.** During Year 1, the following success stories (full stories are available in Appendix A) were developed to highlight results:

- Botswana BPC Solar PV Procurement Support
- EOSOL Madagascar: mini-grid operator's expansion
- Zambia Geospatial Model Development
- Gender Assessment Leading Practice document

**Communication Templates.** SAEP's created communication tools that conform to communication policies consistent with USAID branding guidelines. The following templates were developed in Year 1 and are consistently being utilized by the Program:




- Report template
- Trip report template
- PowerPoint Presentation
- Scope of Work
- Letter of Collaboration
- SAEP Letterhead
- Press Release

**Social Media and Online Presence.** During Year 1, we finalized the SAEP webpage development proposal, which entails the creation of a web page on the Power Africa section of the USAID.GOV website. The USAID Contracts Office Representative (COR) approved the proposal. Next steps include

starting with webpage development with the guidance and assistance of the USAID communications team.

The creation of a SAEP LinkedIn page was discussed and will be implemented in Year 2. A LinkedIn profile provides a platform that is easy to set up, update and effectively link with a relevant audience – particularly private sector and development partners.

In August 2018, SAEP's involvement in the success of the Malagasy mini-grid developer, EOSOL, was featured in a Facebook post on the USAID Facebook page.

**Media Engagement / Press.** USAID published the Zambia Geospatial model press release in May 2018. It was widely circulated and appeared on numerous websites.


*USAID Southern Africa Facebook post about the EOSOL success story. Photo: SAEP*

## 3.1.3 PERFORMANCE MONITORING

Deloitte has developed SAEP's PMEP as a tool to guide the SAEP implementation team with monitor activities, evaluate the performance of the Program and use lessons learned to improve performance. The PMEP includes a learning component and builds off the Power Africa MEL Plan. The SAEP PMEP proposes indicators against each of the expected program outcomes. It also describes the processes that we will use to perform M&E throughout the life of the program. Each indicator has a PIRS. There is also a PIT table, which includes the indicators and targets for the activity.

SAEP submitted a first draft version of the PMEP on 19 July 2017 and it was approved by USAID. Program Principal, Kathleen O'Dell, also visited the week of 15 September 2017 to review the PMEP. SAEP updated the PMEP for the revised contract language for fee. For more information on the PMEP and related activities, please see Appendix B, C, D, E and F.

On 23 July 2018, the USAID team conducted a Data Quality Assessment (DQA) on SAEP programming looking at all reported data for FY17/FY18. The following are the indicators verified during the DQA process:

- Custom: Direct Electricity Access: Number of new grid and off-grid actual direct connections supported by USG assistance
- EG.12-1: Number of people trained in clean energy supported by USG assistance
- EG.12-2: Number of institutions with improved capacity to address clean energy issues as supported by USG assistance
- EG.12-3: Number of laws, policies, regulations, or standards addressing clean energy formally proposed, adopted, or implemented as supported by USG assistance
- EG.12-4: Amount of investment mobilized (in USD) for clean energy as supported by USG assistance
- EG.12-5: Clean energy generation capacity supported by USG assistance that has achieved financial closure
- EG.12-6: Greenhouse gas (GHG) emissions, estimated in metric tons of CO2 equivalent, reduced, sequestered, or avoided through clean energy activities supported by USG assistance

- Custom: Submission of required deliverables as per Section F of the Contract

Results and feedback for DQA will be shared with USAID and Power Africa in Quarter 1 of FY19. SAEP designed and implemented data management tools in FY18 to enhance the efficiency and effectiveness of the SAEP M&E system.

### 3.1.4 ENVIRONMENTAL MITIGATION AND MONITORING

In March of 2015, USAID Southern Africa's Regional Economic Growth Office (REGO) completed an IEE covering the entire REGO portfolio of programs. The IEE recommended a 'Negative Determination with Conditions' for SAEP based on the type of assistance provided by SAEP – 3-E Technical assistance and capacity building designed to increase energy production.

In July 2017, Deloitte submitted to USAID/Southern Africa for review and approval SAEP's Environmental Mitigation and Monitoring Plan (EMMP). The EMMP identifies and describes potential environmental impacts that may result from SAEP-supported activities and provides for a process on how SAEP staff will assess those potential negative impacts and – when needed- mitigate said impacts. The EMMP also presented a process for continually assessing activities as they evolve throughout the process of delivery including agreed-upon monitoring and mitigation measures to be followed by SAEP staff and activity-level counterpart organisations. In August 2017, SAEP's EMMP was revised to include Climate Risk Mitigation component. The revised EMMP was submitted for review to USAID in early September 2017 and approved on 15 September.

As the Program moved to implementation with the SAEP's Year 1 Work Plan approved in September 2017, the SAEP environmental compliance monitoring system has been operationalized. At the program design stage SAEP's Environment Specialist works with activity managers to assess potential negative environmental impacts and develop mitigating actions. As per the approved EMMP, the process continues to include appropriate environmental due diligence activities as codified by an Environmental Review Form, including aligning activities with existing performance standards and ensuring activities comply with national environmental frameworks.

For Year 1, all SAEP's SOWs have included paragraphs committing to compliance with environmental and social impact requirements. In Botswana, SAEP is supporting Botswana Power Corporation (BPC) to comply with environmental and social impact requirements for the 100MW solar tender.

SAEP transaction advisory support is ensuring that internationally recognised environmental and social impact assessment requirements including the host country are complied with and where available, the environmental and social impact reports are obtained as in the case of Xstrata Alloys Wonderkop Operation-Waste Heat to Power Project.

In Malawi, the SAEP Transactional Advisor has engaged with the Environmental, Social and Corporate Governance team at IFC that is supporting the Mpatamanga Hydro Project in all environment and social impact assessments requirements. The developer has agreed to comply with IFC Environmental Performance Standards which meet or exceed compliance requirements as noted under the USAID Global Development Alliances (GDAs) facilitated through REGO. The Mpatamanga Hydro Projects' final Environmental and Social Impact Assessment (ESIA) and Inception Reports are in the process of being finalised by environmental consultants CENOR Consulting Engineers and AGRI.PRO AMBIENTE respectively.

### 3.1.5 GENDER INTEGRATION

In Year 1, SAEP conducted a due diligence review of gender issues and challenges across SAEP priority countries in the energy sector, consisting of both a literature review and in-country consultations. The review found that women face barriers in areas such as: 1) enrollment in science, technology, engineering and mathematics (STEM) fields and university programs; 2) advancing to leadership,

supervisory and technical positions in utility companies; 3) establishing female-led businesses and obtaining financing to scale up businesses; and 4) being consulted during policy and regulatory processes for energy and electricity programs. The results of this review were synthesized into the SAEP Gender Action Plan – a roadmap for the practical implementation of SAEP's gender equality goal that aligns with planned program activities.

SAEP also focused on initiating conversations with key stakeholders on the importance of female empowerment and understanding how those institutions are currently considering gender equality in their operations and service delivery. For example, the team worked with LEC to understand if its current strategic plans incorporate gender considerations and recommended areas for improvement.

Key gender integration activities and stakeholder meetings held during this fiscal year include:

- The Gender Specialist STTA presented on a panel at the RERA Conference on 30 November 2017. The presentation focused on empowering women through energy access
- SAEP hosted a Gender Integration Workshop on 5 December 2017, led by the SAEP Gender Specialist and the Gender Specialist STTA, for the SAEP technical team leads and USAID Southern Africa Mission. The workshop was centered on the USAID SAEP Gender Integration Framework, which lists out the primary gender constraints within the program and potential interventions to address those problems within the scope of the SAEP program
- The Final Gender Action Plan was submitted to USAID for final review and approval on 10 January 2018
- Attended the LEC Strategic Plan Development session held in Lesotho in March 2018. The Gender Advisor facilitated a session on the relevance of gender integration in the strategic planning process, linking the key considerations with the strategic national organizational goals and objectives. The session created awareness on the importance of gender integration in the implementation strategies and operations of the utility. There was a general consensus that gender will be taken on board in the development of the strategic plan moving forward and the Gender Advisor will provide technical support for gender related issues throughout the process


*Limpho Maema, former SAEP Gender Specialist, presenting at the Gender Integration Framework Workshop held in Pretoria in December 2017. Photo: SAEP*

- Gender activities were integrated in SOWs for implementation. Discussions with Outcome Leads on the practical implementation of the suggested activities were ongoing and integrated into the completion of Year 1 activities and into Year 2 programming
- Developed a framework for Female Hiring and Retention in Utilities to facilitate implementation of the following Gender Action Plan Activities. It will be rolled out with EGENCO in Malawi as well as ZESCO
- The gender mainstreaming activities included in the Year 2 Work Plan were approved by the COR; activities will kick off once the new Gender Specialist joins the team on 1 October 2018

- SAEP recognizes gender integration as a strategy to accelerate the socio-economic empowerment of women in the Southern African region. To this end, SAEP wrote to SADC, SAPP, SACREEE and RERA encouraging them to ensure equal participation of women for all SAEP related areas of support

## 3.2 FINANCE AND OPERATIONS

In Year 1, SAEP succeeded in establishing the main program office in Pretoria office, fielded the vast majority of resources as included in the winning proposal and recruited and successfully on-boarded new staff. Agreements with core subcontractors needed for delivery of the Program were also finalized.

*The SAEP Office in Pretoria, South Africa. Photo: SAEP*

**Office Set-up.** Year 1 began with finalizing and signing a lease agreement and purchase order for the SAEP project office with the property owner. Renovations were done, the office furnished, IT infrastructure procured and on 20 September 2017 the SAEP team was able to move into the new offices situated in Brooklyn, Pretoria.

The SAEP satellite office in Lusaka, Zambia has been operational since 6 August 2018. Various SAEP staff work from the office including the OC4 Lead, the Zambia Country Manager and the Zambia Administration Assistant. The office includes a functioning conference room with seating capacity for eight people as well as a living facility situated above the office that can accommodate up to three people. The accommodation is being used by project staff while on temporary duty in Lusaka.

**Subcontracting.** SAEP contracted the following service providers to provide technical assistance, advisory support and capacity development:

- **Deloitte South Africa:** Provides professional and administrative personnel to support project implementation
- **McKinsey:** Management consulting firm in power sector planning, energy policy, and program strategy
- **CrossBoundary:** Provides transaction advisory support and designs go-to-market strategies across Africa for solar home systems (SHS) and mini-grid providers and investors
- **Strategic International Advisory (SIAL):** Specialist utilities and infrastructure advisory practice
- **Another Option:** Develops communication and knowledge management processes and plans
- **Mott MacDonald:** Management, engineering and development consultancy
- **Ledwaba Mazwai Attorneys:** Involved in advising on the procurement of IPPs to produce and supply energy to the national grid
- **Deloitte Zambia:** Facilitates the SAEP satellite office in Lusaka

*See Appendix G for a comprehensive list of resources mobilized for short term technical assistance.*

### 3.2.1 PROJECT STAFFING

Deloitte identified and mobilized required resources to support the delivery of SAEP as a program. Please refer to Appendix H for the Deloitte SAEP Organizational Chart. In Year 1, the following Program staffing additions and changes occurred:

- Craig VanDevelde, COP, was mobilized to begin program start-up and stakeholder engagement in April 2017; he received a South African visa and mobilized to Pretoria full-time in September 2017
- Liz Pfeiffer, DCOP-Technical, was mobilized to begin Program start-up and stakeholder engagement in April 2017; she received a South African visa and mobilized to Pretoria full-time in July 2017
- Rajiv Weeraratne, DCOP – Finance, received his visa in June 2017 and mobilized to Pretoria full-time to start up the finance and operations function of SAEP
- Muriel Brown, Deputy Director of Finance and Operations, joined SAEP in April 2017
- David Jankofsky, Outcome 1 Lead, was mobilized on SAEP in May 2017
- Willem Theron, Outcome 3 Lead, was mobilized on SAEP in May 2017
- Jorry Mwenechanya, Outcome 4 Lead, was mobilized on SAEP in May 2017
- Maria Mbengashe, Country Manager RSA, eSwatini and Lesotho, and Shako T'Ulamba, Regional Operating Framework and Transmission Specialist joined SAEP in July 2017
- Wayne Mikutowicz, Outcome 2 Lead, joined SAEP in July 2017
- Gerrit Clark started as Namibia Country Manager in July 2017
- Malcom Fawkes, Outcome 5 Lead, joined SAEP in July 2017
- Izak du Plessis, Management Specialist, joined SAEP in July 2017
- Limpho Maema, Gender Strategy Specialist, joined SAEP in September 2017
- Pelo Hlabangwane, Pretoria Office Administrative and Travel Coordinator, joined SAEP in September 2017
- Jenny Huang, Cross-Cutting Support, joined SAEP in September 2017
- Christopher Mubemba and Arthur Wengawenga were hired as Zambia and Malawi County Managers respectively, in October 2017
- Chadd Wish, Project Coordinator, joined SAEP in October 2018
- Robinah Kapawa, Logistics Officer, joined SAEP as in January 2018
- David Jarrett joined SAEP as the Namibia Country Manager in January 2018
- Bruno Batista joined SAEP as the EDM Embedded Advisor in January 2018
- Rija Rakotoson joined SAEP as Madagascar Country Manager on in January 2018
- Shamiso Matambanadzo joined SAEP as the Communications Specialist in January 2018
- Adam Newman replaced Dennis Hall as SAEP Project Manager in January 2018
- Tshwanelo Rakaibe joined SAEP as the OC3 Deputy Lead/Utility Economist in February 2018
- Trust Mapfumo joined SAEP as the M&E Specialist in February 2018
- Lorna Tucker joined SAEP as the Grants Manager in February 2018

- Thulane Lekala joined SAEP as the Finance Officer in March 2018
- Tshegofatso Neeuwfan joined SAEP as the Deputy OC4 Lead / Renewable Energy Systems Engineer in April 2018
- Cecilia Ncube joined SAEP as the Gender Specialist in May 2018
- Albert Ikhile joined SAEP as the PMO Lead on in June 2018
- Priscilla Miti joined SAEP as the Zambia Office Administrative Assistant in June 2018
- Bhavika Patel took over administrative activities from Debbie Colhoun in support of the Deloitte-Southern Africa subcontract in June 2018
- Ria Govender joined SAEP as the OC1 Deputy Lead in July 2018
- Phumzile Mnisi joined SAEP as the General Worker in July 2018
- Elias Sethosa joined SAEP as the Driver/Logistics Assistant in July 2018
- Helga Wenhold joined SAEP as the Copy Editor in July 2018
- Charles Liebenberg joined SAEP as the Lead Transaction Advisor in August 2018
- Pelo Hlabangwane left SAEP in August 2018
- Shamiso Matambanadzo left SAEP in August 2018
- Nkosi Ntsele took over administrative activities from Bhavika Patel in support of the Deloitte Southern Africa subcontract in June 2018

*Members of the SAEP team pose for a team photo during a potjie cookout competition at the SAEP Year 1 Mid-Year Review session in South Africa, March 2018. Photo: SAEP*

- Surita Wetzel joined SAEP as the Talent/Human Resources Assistant in September 2018

### 3.2.2 PROCUREMENTS AND GRANTS

In Year 1, SAEP developed the Catalyzing Local Opportunities Fund (CLOF) Plan and Grants Manual. In accordance with the manual, all grants will be administered through a clear, transparent, fair and competitive process, in accordance with 22 CFR 216 and USAID's ADS 201.5 and 204 regarding environmental safeguards and subject to COR review and CO approval.

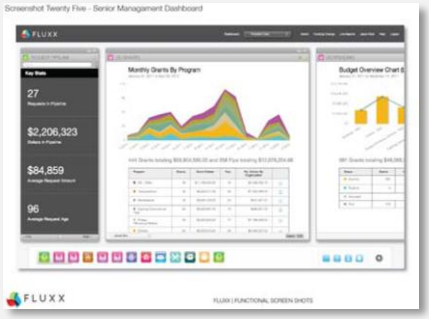
SAEP used the Fluxx Grant Management Information System (GMIS) system – a dedicated, IT-enabled grants management platform – to configure the SAEP grants platform. This system will streamline and improve the CLOF management and reporting process. Through Fluxx's secure, cloud-based data exchange, USAID can access instantaneous and customized reports on CLOF disbursements, allocations and performance. Grantees can view up-to-date reports on their goals, milestones and financial performance, building local performance management capacity.

SAEP identified grant ideas that aligned with technical assistance delivered and gaps identified in Year 1. These ideas were further narrowed to focus on results-based financing for access and connection. The initial rounds of grant financing will focus on:

- Support to the SHS market in Malawi through the Malawi SHS Kick-Starter. Areas of support include mobile money support, market entry support and scale-up support to organizations implementing off-grid SHS programs in Malawi
- Provide grant funding to scale-up companies' corporate social responsibility (CSR) objectives that contribute to increasing access and connections in the region

**Better Reporting and Management – Fluxx**

Fluxx's GMIS system supports interconnected data with grantees and has powerful data visualization and reporting capabilities to aid management, monitoring and compliance of grant portfolios. Grantees and authorized users, including USAID, can configure their own dashboards and task lists to support efficient operations and reporting.




In terms of procurement of goods, the Program successfully completed procurements of IT equipment and furniture to fit out the SAEP Pretoria Office. In addition, SAEP procured a biometrics system for timekeeping and security purposes. In July 2018, a competitive procurement process was initiated within the local market to procure an eight-seater passenger vehicle for the project. The Hyundai H1 bus was selected as the best option to fit the travel requirements of the SAEP team. An approval request was submitted to and approved by USAID to proceed with the procurement of a motor vehicle under Geographic Code 935 pursuant to AIDAR 752.225-70(c).

## 3.3 CHALLENGES AND RISKS

During Year 1, SAEP encountered several significant challenges. SAEP continuously tracked these issues and was able to overcome some of the risks. We will continue to consider potential challenges and risks in Year 2.

### Challenges:

- *Delay in Deloitte Registration in South Africa and Hiring of Employees*. The tedious registration process in South delayed the ability to open a bank account and secure the correct documents and information to begin to hire employees. Registration came through on 7 September 2017. Due to South Africa's laborious hiring protocols, most new hires could only start in the second quarter of FY18. SAEP largely mitigated this issue through mobilizing selected Deloitte Home Office resources to the field for short term assignments
- *BPC engagement.* SAEP experienced a number of challenges in the collaboration with the BPC over Year 1. These included 1) BPC's desire to continue to expand the scope of our embedded advisor Christine Covington's support, which was intended to be focused on the 100 MW solar PV tender process, 2) concern with BPC leadership's desire to pursue 'leading practices', since further opportunities – besides the 100 MW solar PV tender activity – to assist BPC to continue to grow were eroded by BPC, and 3) BPC investigation into irregularities in other procurements have delayed the 100 MW solar procurement
- *WB/IFC electrification program coordination in Zambia.* In the second quarter of FY18, the IFC and World Bank were surprised by the level of detail in the Zambia geospatial model and had initial concerns about how the model and our work would fit into their work on Zambia's Electrification

Strategy. This came about despite meetings with the IFC and World Bank during Year 1 work planning. SAEP was able to quickly discuss with relevant World Bank and IFC stakeholders and build a coordinated communications and training program on the model and feed information into the IFC and World Bank electrification and off-grid programs delivering a coordinated Power Africa partners approach in Zambia

- *Low connection rate in Malawi.* On-grid connections in Malawi is challenging due to the sector transition and the poor financial status of ESCOM. In addition, there are delays in the adoption of the revised Energy Policy which would establish their Rural Electrification Agency. The SAEP Malawi Sector Assessment identified an opportunity to drive a significant amount of connections through a large scale, off-grid "kick-starter" program designed to attract private sector SHS players to enter and/or scale up their operations in Malawi. In Year 1, we developed an initial design for the program we will finalize the detailed design and support program roll-out early in Year 2
- *Political Unrest in Madagascar.* In the third quarter of FY18, wide-scale political protests against new electoral laws some believe inhibit candidates from participating in the presidential election due later this year have since spilled over into the University of Antananarivo. This has impacted SAEP's work to complete social and economic surveys in support of an SHS strategy as the field work was largely to be completed by university students
- *Counterpart activity priority changes*. Counterparts often requested changes to activities agreed on during inception trips. Due to the flexibility USAID gives SAEP in the yearly work planning, we have been able to adapt to counterpart needs and deliver results
- *Increased travel costs.* Due to scheduling difficulties and changes in commitments from government counterparts, booked travels and set engagements have had to be cancelled or changed, which often leads to additional costs and delay in moving activities forward. Through various plans of action, SAEP is proactively trying to mitigate such cases and to operate at the set travel budget

## Ongoing Risks:

- *Disjointed Communication Risks.* Multi-stakeholder involvement and SAEP's complex nature may pose a potential risk of sharing segregated details to different stakeholders. We plan to address lines of communication at three levels: 1) among the SAEP team; 2) between SAEP leadership and USAID; and 3) between SAEP leadership and external stakeholders. This will ensure consistency of communication with internal as well as external stakeholders at different stages of program implementation
- *Electoral and Political Transitions*. Over the lifespan of the SAEP program, it is likely that some, if not all, Southern African nations will experience political transitions following elections. SAEP has been and will continue to focus on building broad, non-partisan governmental relationships in host countries and gaining unified support for energy sector reform. The following political events caused and could possibly still cause implementation disruptions, including:
    - Continued delays due to new LEC board appointments, ESCOM Chief Executive Officer change, and party elections in South Africa
    - Results of elections in eSwatini (took place September 2018) may impact SAEP's current relationships with the government should key officials change, potentially impacting a suite of activities currently being delivered there
    - South Africa's elections planned for 2019 may impact the work currently being planned to support the IPP Office's REIPPP Bid Window 5 (BW5). BW5 is expected to bring in an additional 1,800 MW of RE generation; however, financial close of the projected MW

procured therein would happen until the end of the calendar year at the earliest. A significant change in government could result in BW5 projects never reaching financial close

- *Global Market Fluctuations and Regional Interdependencies*. Prices of energy commodities are often affected by global market fluctuations; likewise, national energy systems naturally have regional interdependencies as it pertains to imports, exports, and transportation networks. Because of this, each individual Southern African nation is somewhat constrained by trends and events impacted by external factors. To mitigate this constraint, SAEP will incorporate market research and trend analysis to stay abreast of global energy market developments and changes. SAEP will also focus on regional community engagement and coalition building to unite Southern African nations in energy sector reform and coordination where possible. SAEP will also monitor interdependencies that can affect the success of the Program

# APPENDIX A SAEP SUCCESS STORIES

## Building a Solar Future in Botswana

Over the past decade, Botswana's interst in large-scale renewable energy has been increasing as demand for electricity continues to grow. The Botswana Power Corporation (BPC), Botswana's national electric utility, expects energy demand to more than double by 2035 due to population growth and an expanding industrial sector. Botswana's availability of both open land and sunshine makes solar an ideal technology choice as they work to expand generation capacity. However, BPC to date has no experience in procuring, building and operating large-scale solar. If BPC is to depend on solar to meet future demand, they must bring in new partners from the private sector with the skills and experience to design, finance, build and manage these projects.

BPC had already tried several times to move forward with a 100 MW grid-connected solar PV project; each time without success. Once constructed, BPC knew the solar facility would help meet growing demand by generating 131,400-megawatt-hours annually. In addition, the project was forecasted to generate $260 million in much needed revenue for the utility[11]. Possibly most important of all, the 100 MW solar PV project will demonstrate to project developers and financiers that Botswana has the needed enabling environmental for the private sector to play a meaningful role in the Botswana energy sector.

In August 2017, BPC requested Power Africa support in helping move forward a new 100 MW solar PV procurement. Through the USAID Southern Africa Energy Program (SAEP), Power Africa is helping to provide forward-looking and innovative solutions to BPC as they pursue the project. Assistance includes assisting BPC in addressing a range of issues including: i) managing complex procurement processes so to be both compliant with GOB requirements as well as meet the expectations of privates sector project developers and financiers, ii) selecting technical advisors as a critical step in finalizing the structuring and documentation required to develop and release the Request for Proposal (RFP), iii) developing an effective Power Purchase Agreements for use in contracting the winning bidders, iv) emphasizing the need for effective preparation prior to RFP release, including conducting grid studies, environmental assessments, and selecting suitable land sites.

Once completed, in addition to the increased generation and increased revenue, the successful 100 MW solar PV project will send a strong signal to the market that Botswana is serious about a competitive RE procurements. With this, Botswana will be better able to attract greater private sector capital to fund future renewable energy power projects need to meet the country's growing energy demands.

**Installed Solar Capacity**

**2.754MW**

**National Demand Average**

**550MW**

**Current Access Rate**

**Rural: 54% Urban: 66%**

[11] Over a 20-year period

# Financial Model Helps Malagasy Mini-grid Operator Expand

Many independent power producers (IPPs) regard providing energy services in rural Madagascar as challenging. In addition to the country's unforgiving mountainous terrain and complex operating environment, mini-grid developers have identified access to project financing as a key barrier to service expansion. Still, many developers are looking to start new, or expand existing rural power delivery operations in a country where approximately 76% of the rural population have no access to electricity. One such firm, EOSOL Madagascar, is a Malagasy mini-grid developer led by female entrepreneur, Ms. Camille ANDRE-BATAILLE, and is successfully operating three pilot mini-grid projects in Madagascar since 2014. EOSOL's growth plan has the firm operating 50 mini-grids across the country, allowing more than 100 villages to get access to electricity, implementing a range of technologies including PV, energy storage systems and diesel PV-hybrid generation systems, and spanning from as small as 30 kilowatts to a maximum of 650 kilowatts.

*The Malagasy developer's solar PV array delivering power to one of their two pilot sites*

In 2018, EOSOL reached out to USAID Southern Africa Energy Program (SAEP) requesting assistance in helping address their key barrier: financing. While EOSOL is well-positioned for expansion from a technical and operational perspective, the CEO realized the firm needed support in developing a robust, bankable financial model to structure projects, identify fundraising needs and secure increased private investment. SAEP was requested to enhance EOSOL's financial tools and streamline their implementation processes designed to support their expansion plans.

SAEP fielded a team of experts who – working with EOSOL's own Finance Department – developed a versatile financial model capable of aggregating inputs and illustrating the immediate effect of changing financial assumptions on project cash flows, solvency and investor returns. The financial model was also designed to assist EOSOL to realistically reflect modelled cashflows and financing needs when embarking on future projects, so that they can price tariffs correctly and can accurately present their financial position to potential investors.

EOSOL requested the model be completed by early 2018 so as to incorporate it into planned proposals to ADER (Rural Electrification Agency), ARELEC (Electricity Regulator) and MEH (Ministry of Energy and Hydrocarbons) and has seen quick success. On August 2, 2018, ADER named EOSOL a winning bidder to build and operate mini-grids to cover 54 different villages; thus, extending electricity services for the first time to approximately 20,100 new customers by 2023. As EOSOL scales up to deliver this work, the financial model will i) continue to be used as a tool to reassess and refine the firm's financial strategy for the awarded projects while at the same time ii) will be used to attract new private investment to fuel future expansion. Potential investors have already noted their increased intent in supporting EOSOL as a result of the new financial model.

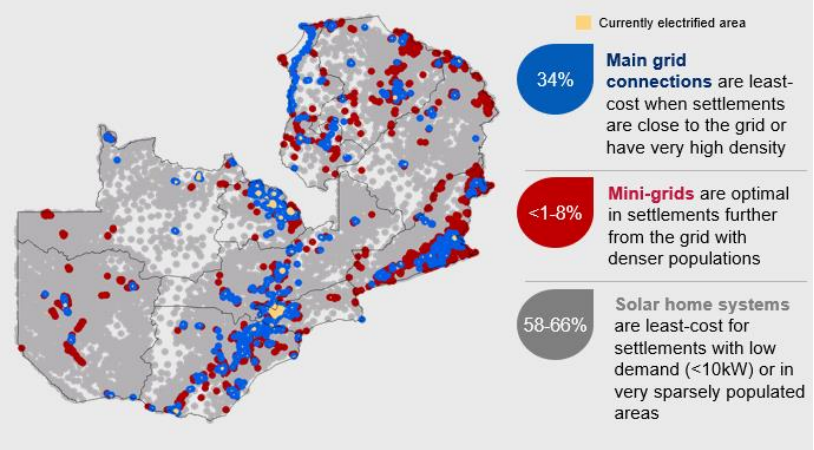
> ***"The team's support has been significantly helpful and constructive. As a Malagasy mini-grid developer, we were pleased to work with a truly dedicated team who spent time and efforts understanding our business and the country's specificities..."***
>
> ***EOSOL Chief Executive***

EOSOL is still at the early stages of scale-up and SAEP will continue to provide technical assistance to support EOSOL to achieve its goal of five megawatts of mini-grid development over the next few years. SAEP hopes that by addressing challenges such as the limited capacity to raise financing for projects, Madagascar will attract more private power developers to increase the rural electrification rates.

> ***"We are significantly more interested in investing, now that we have seen the improvements to the project model."***
>
> ***Potential EOSOL investor***

# Geospatial Tool to Guide the Zambian Energy Sector

Zambia is well-endowed with hydropower and solar energy resources, which could facilitate production of electricity for both the urban and rural areas of the country. However, at present, only 27% of the overall population has access to electricity (62% of the urban population and 4.5% of the rural population). The Government of Zambia recognizes that to meet their goal of having 66% of the population with access to power by 2030, significant efforts will be required in the off-grid space.




The USAID Southern Africa Energy Program (SAEP), a Power Africa Initiative, is helping to provide forward-looking and innovative solutions to the challenges of energy access and power sector development in Southern Africa. In collaboration with the Zambian Ministry of Energy and the Rural Electrification Authority (REA), SAEP developed a geospatial tool to guide the advancement of the Zambian electrification strategy, with specific emphasis on off-grid solutions. The tool maps the country's population centers; current grid lines and substations; localities suitable for solar, hydro and other renewable energy (RE) generation types; and presents the lowest-cost electrification options (grid extension, developing mini-grids or installing solar home systems) for each currently unelectrified household across the country.

The tool demonstrates the importance of off-grid solutions in a country such as Zambia, and has been very well-received by both the public and private sectors – proving a case to the Government that off-grid solutions need to be recognized and supported. The geospatial tool – which has been made available to various stakeholders working to electrify Zambia – has been commended for enabling the private sector to determine which off-grid spaces are the most ideal to begin work today, as well as how best their efforts align with a least-cost electrification approach. Further, the model has been universally recognized as an effective, practical and easy to use tool that can be layered and integrated into already running systems. On a 'least-cost' basis, the model clearly indicates that only 34% of currently unelectrified households nationally should be serviced by the grid, with off-grid solutions (mini-grids powered by solar[12] and solar home systems) servicing the remaining 66%.

[12] Hydro mini-grids are not included as their cost is always greater than the cost of solar mini-grids


*Participants follow proceedings at the geospatial model launch in Lusaka, Zambia in March 2018. Photo: SAEP*

During the launch of the completed geospatial tool in March 2018, both the Ministry of Energy and REA staff recognized the tool's potential for impacting the design as well as the implementation of the national electrification plans and communicating those plans to the public. The World Bank will use this tool as a key input for its national electrification strategy where the tool will be further refined into an implementation plan, with associated technical and investment plans. The private sector is already using the tool to identify new areas for market entry that will shape their strategies for years to come. Over the past few months, SAEP has been providing customized support to members of the Solar Industry Association of Zambia (SIAZ) to use the geospatial model and to refine the data. SAEP has also helped solar home systems (SHS) companies with route to market analysis, specifically weaving in demographic data and new market locations to help the companies to target their next expansion locations more efficiently and with a more data-driven approach. SAEP has received positive feedback from SHS providers that have been using the geospatial model. As a result of SAEP's work, over ~348,000 homes in Zambia are expected to gain access to electricity by 2022.

The demand for renewable energies has recently seen significant growth as it continues to prove to be a viable energy alternative for the nation, the geospatial tool provides guidance as to the optimal technology mix that would allow Zambia to reach its ambitious goals, highlighting the crucial role that off-grid technology will play, particularly in increasing rural electrification.

> *"This is the most data-driven approach we have used to expand to new locations. I am happy to say that our CEO absolutely loved the work you have done and is hopeful of something similar being rolled out in Malawi. Now we don't just focus on one village over a weekend, we also go to nearby settlements identified by the geospatial model that are off the beaten track."* **SunnyMoney,** solar light distributor and SIAZ member

## Gender Action Plan Approach and Development

Click here to access the 11-page document

# APPENDIX B PERFORMANCE MONITORING & EVALUATION TABLES

The results in the table below refers to indicators of the program results for FY18 Q3 as well as the cumulative for FY18 and this is attributable to SAEP's efforts.

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| **New Generation/Transaction Indicators** | | | | | | | | | | |
| 1 / PA1 | (#AA) Capacity (MW) from Transactions Supported by SAEP that Achieved Financial Closure (4.8.2-33 and PA) [13] | Written confirmation from Financial Mobilization Memo (FMM) party<br><br>PATT and SAEP transaction tracker | Target | 0 | 0 | 100 | 200 | 25 | 325 | SAEP supported 25 transactions to reach financial close in FY18:<br>**Quarter 3**: 667.16 MW<br>South Africa<br>• Wind: 417.16 MW<br>• Solar: 225 MW<br>• Biomass: 25.00 MW<br>**Quarter 4**: 1,463.22 MW<br>South Africa<br>• Wind: 945.62 MW<br>• Solar: 512.90 MW<br>• Hydro: 4.70 MW<br><br>More detailed information about each transaction can be found in Appendix C. |
| | | | Actual | 0 | 0 | 0 | 667.16 | 1,463.22 | 2,130.38 | |
| 2 / PA2 | Generation and Transmission capacity (MW) pending financial closure (PA) | PATT and SAEP transaction tracker | Target | 0 | 3,833 | 3,733 | 3533 | 3,508 | 3,508 | Indicator measures new transactions added to the pipeline to equate to the total amount in the pipeline. The team has continued to add new MWs in Q4<br>In Q4, SAEP added 2,558.96 MW of new projects to transaction pending financial close pipeline to close the Year 1pipeline |
| | | | Actual | 0 | 3,833 | 5,291 | 6,831.42 | 9,390.38 | 9,390.38 | |
| | | | **Actual Total** | **0** | **3,833** | **5,291** | **6,831.42** | 9,390.38 | 9,390.38 | |

[13] GCC indicator is "Clean energy generation capacity (MW) that has achieved financial closure (4.8.2-33)" This indicator includes both our target for 3000 MWs generation and 1000 MWs of new transmission

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Gx | 0 | 3,033 | 4,491 | 6,031.42 | 6,990.38 | 6,990.38 | total at 9,390.38 MW. Given the total pipeline for Year 1 and the projects that reached financial close the active pipeline at the end of Year 1 is 7,260 MWs<br><br>*Note: The actual figure is cumulative and shows the total generation and transmission capacity pending financial closure at the end of the reporting quarter. It does not remove MWs for those that reach financial close during the period.* |
| | | | Tx | 0 | 800 | 800 | 800 | 2,400 | 2,400 | |
| 3 / PA3 | Generation Capacity (MW) Commissioned (PA) | SAEP Installation Memos | Target | 0 | 0 | 0 | 0 | 0 | 0 | SAEP did not support the commissioning of generation projects in FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Access Indicators** | | | | | | | | | | |
| 4 / PA10 | (#AB) Direct Electricity Access (PA) (millions of connections) | Program records for OC4 and utility/ government official publications | Target | 0 | 0 | 0 | 0 | 0.05 | 0.05 | The reported connections (64,413 connections) are a result of SAEP's activities in Zambia and Madagascar.<br>**Zambia**<br>60,501 individual off-grid connections.<br>**Madagascar**<br>3,911 individual off-grid connections.<br>For Q4, SAEP achieved 0.029752 connections<br>*Note: the unit of measure for this indicator is millions of connections.* |
| | | | Actual | 0 | 0 | 0.001995 | 0.032666 | 0.029752 | 0.064413 | |
| | | | **Actual Total** | 0 | 0 | 0.001995 | 0.032666 | 0.029752 | 0.064413 | |
| | | | On-Grid | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | | Off-Grid | 0 | 0 | 0.001995 | 0.032666 | 0.029752 | 0.064413 | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 / PA11 | Number of New Grid and Off-Grid Projected Direct Connections (PA) | Program records for OC4 and utility/ government official publications | Target | 0 | 0 | 0 | 0 | 0.4 | 0.4 | **Quarter 2**<br>Off grid<br>• Madagascar: 92,600<br>**Quarter 4**<br>On grid<br>• EDM: 900,000<br>• City of Windhoek: 40,000<br>• ZESCO: 34,000<br>• Angola: 300,000<br>• Malawi: 300,000<br>Off grid<br>• Malawi: 300,000<br>• Zambia: 884,275<br>• Mozambique: 17,500 |
| | | | Actual | 0 | 0 | 0.092600 | 0 | 2,775,775 | 2,868,375 | |
| **System Efficiency Indicators** | | | | | | | | | | |
| 6 / PA12 | Electricity Loss Reduction (Aggregate Losses (PA)) | Data collection with utilities (survey for annual data collection) | Target | 0 | 0 | 0 | 0 | 0 | 0 | To be estimated when loss reduction program utilities are selected, and independent loss studies are completed to provide objective baseline levels. Reduction targets set by country in coordination with each regulator, utility and KPIs established in OC2. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| 7 / PA13 | Energy Efficiency or Energy Conservation (4.8.2-31) | Program records for OC2 and OC4 | Target | 0 | 0 | 0 | 0 | 0 | 0 | To be estimated when EE initiatives and loss reduction utilities are selected and baselines are calculated. Baselines set by country and specific targeted EE initiatives in coordination with utilities in the countries where EE activities are implemented.<br>For the Malawi ESCOM EE initiative, the baseline will be completed as part of the activity in FY19 Q1 |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Product Indicators** | | | | | | | | | | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 8 / PA15 | (#Y) Number of Laws, Policies, Strategies, Plans, or Regulations Officially Proposed, Adopted, or Implemented (4.8.2-28) (PA) | Record of laws, policies, strategies, or regulations | Target | 0 | 1 | 0 | 2 | 3 | 6 | SAEP completed the following activities in FY18:<br>**Quarter 1**<br>Malawi<br>• Recommendations to MERA's Procedural Guidelines and Technical Guidelines (Regulations) for evaluating tariff applications adopted by MERA's Board [Adopted]<br>**Quarter 3**<br>Botswana<br>• End User Tariff Determination Procedures and Information Requirements [Proposed]<br>• Licence Procedures-IPP, Electricity Export, Retail Petroleum Stations and Stand-by Generators [Proposed]<br>**Quarter 4**<br>Malawi<br>• Regulatory Framework for Mini-Grids in Malawi [Proposed and Adopted]<br>• Recommendations to MERA's Procedural Guidelines and Technical Guidelines (Regulations) for evaluating tariff applications adopted by MERA's Board [Implemented]<br>Regional<br>• SADC Protocol on Energy [Proposed] |
| | | | Actual | 0 | 1 | 0 | 2 | 4 | 7 | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | Number of Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented (Custom) | Program records | Target | 0 | 5 | 15 | 15 | 25 | 60 | SAEP completed 46 activities for this indicator in FY18. |
| | | | Actual | 1 | 6 | 9 | 16 | 14 | 46 | |
| **Tracking and Capacity Building Indicators** | | | | | | | | | | |
| 10 | (#X) Percentage of RFP Section F Deliverables Submitted in a Timely Manner (Custom) | Program records | Target | 100% | 100% | 100% | 100% | 100% | 100% | SAEP reached the assigned target for FY18 on this indicator. All deliverables were submitted in a timely manner. |
| | | | Actual | 100% | 100% | 100% | 100% | 100% | 100% | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | Number of Institutions with Improved Capacity (4.8.2-14) | Program records. Organization assessment capacity tool | Target | - | - | - | - | 10 | 10 | SAEP is in the process of developing a capacity assessment tool in agreement with USAID to track this indicator in FY19. For FY19, SAEP improved the capacity of 8 institutions:<br>ZESCO<br>• Trained ZESCO in vRE integration etc.<br>BERA<br>• SAEP support with the development of the End User Tariff Determination Procedures and Information Requirements<br>• Licence Procedures-IPP, Electricity Export, Retail Petroleum Stations and Stand-by Generators<br>ECB<br>• Develop assessment report on effect of new laws, policies and strategies |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Actual | - | - | - | - | 8 | 8 | ERB<br>• Assist ERB with RIA compliance and additional capacity building<br>LEC<br>• LEC Strategic Plan<br>SAPP<br>• SAPP Market SC Workshop on Balancing Market Development<br>SIAZ<br>• Support to the private sector SHS players through the Solar Association's Expansion Program<br>EGENCO<br>• Technical assistance to EGENCO: M&E support for the implementation of EGENCO'S strategic plan<br>The team originally predicted that ADER Madagascar, REA Zambia and ESCOM Malawi would be advanced, but the team is still finalizing support activities to these institutions into FY19 Q1 |
| 12 | Number of Women in Energy Sector Leadership Roles (Custom) | Program records. Energy institution records and interviews | Target | 0 | 0 | 0 | 0 | 2 | 2 | SAEP recently recruited a Gender Advisor. This indicator will be fully tracked in FY19. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13a | Number of People Receiving Training in Global Clean Energy (4.8.2-6) | Training Attendance Sheets | Target | 0 | 0 | 15 | 20 | 10 | 45 | SAEP reached the assigned target for FY18 on this indicator. The number is higher than predicted because of a training in Zambia on the geospatial model and the SAPP Market Sub-Committee Workshop on Balancing |
| | | | Actual | 0 | 0 | 114 | 27 | 125 | 266 | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Actual Total** | **0** | **0** | **114** | **27** | **125** | **266** | Market Development that we did not predict would have as many participants. |
| | | | Male | 0 | 0 | 84 | 24 | 109 | 217 | |
| | | | Female | 0 | 0 | 30 | 3 | 16 | 49 | *More detailed information about each training can be found in Appendix E.* |
| 13b | Person-Hours of Training (4.8.2-29; MIL 4.4.1-34) | Training Attendance Sheets | Target | 0 | 0 | 120 | 160 | 80 | 360 | SAEP reached the assigned target for FY18 on this indicator. SAEP conducted training and capacity building activities in the following countries in FY18: |
| | | | Actual | 0 | 0 | 710 | 121.5 | 1,266 | 2,097.5 | The number is higher than predicted because of a training in Zambia on the geospatial model and the SAPP Market Sub-Committee Workshop on Balancing Market Development that we did not predict would have as many participants.<br><br>*More detailed information about each training can be found in Appendix E.* |
| **Leverage/ Investment Indicator** | | | | | | | | | | |
| 17 / PA18 | Total Public and Private Funds Leveraged by USG for Energy projects (USD millions) (MIL 4.4.1-32) (PA) | Grant records. Project funding records | Target | 0 | 0 | 0 | 0 | 0.75 | 0.75 | Results for this indicator are linked to the 25 REIPPP projects that reached financial close in FY18, which resulted in US$3.945 billion. |
| | | | Actual | 0 | 0 | - | 1.325 | 2.620 | 3.945 | *Note: the actual values are based off the full project costs for those projects that reached financial close.* |
| **Power Africa Tracking Indicators** | | | | | | | | | | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| PA4 | Number of Transactions Commissioned (PA) | SAEP Installation Memos | Target | 0 | 0 | 0 | 0 | 0 | 0 | SAEP did not commission transactions in FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| PA5 | Number of Transactions Pending Financial Closure (PA) | Power Africa Transaction Tool and SAEP transaction list | Target | 0 | 11 | 11 | 11 | 9 | 9 | 32 transactions with a total of 7,260 MW were pending financial close by the end of FY18. *Note: The Year 1 Total is not cumulative* |
| | | | Actual | 0 | 11 | 8 | 46 | 32 | 32 | |
| PA6 | Number of Transactions Reached Financial Closure (PA) | Written confirmation from FMM party | Target | 0 | 0 | 2 | 3 | 2 | 7 | SAEP supported 25 transactions with a total of 2,130.38 MW to reach financial close in FY18. |
| | | | Actual | 0 | 0 | 0 | 8 | 17 | 25 | |
| PA7 | National Energy Mix Showing % of MWs from Clean Energy Technologies in Each Country (PA) | PA PIRs; RERA national data | Target | TBD | TBD | TBD | TBD | TBD | TBD | Indicator will be tracked Consistent with PA reporting and sources based on 2016 baseline numbers (or the latest reported). SAEP will start tracking and reporting on this indicator in Q1 FY 2019.Results will be provided on an ongoing basis as requested. |
| | | | Actual | TBD | TBD | TBD | TBD | TBD | TBD | |
| PA8 | Kilometers of Power Lines Reached Financial Close (PA) | Written confirmation from FMM party | Target | 0 | 0 | 0 | 0 | 0 | 0 | None of the power line projects SAEP is supporting reached financial close in FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| PA9 | Kilometers of Power Lines Constructed or Rehabilitated (PA) | Written confirmation from FMM party | Target | 0 | 0 | 0 | 0 | 0 | TBD | SAEP did not support power line construction or rehabilitation in FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |

| # | Indicator | Data Source | | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Year 1 Total | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| PA14 | Greenhouse Gas (GHG) Emissions Reduced, Sequestered, and/or avoided (4.8-7) (PA) (thousand $tCO_2e$) | Program records, using the USAID CLEER Tool | Target | - | - | - | - | 0 | 0 | SAEP did not commission transactions in FY18, therefore there is nothing to report for this indicator. |
| | | | Actual | - | - | - | - | 0 | 0 | |
| PA16 | Utilization of Risk Mitigation Tools (PA) | Written confirmation from IFI or govt. | Target | 0 | 0 | N/A | N/A | N/A | N/A | Results for this indicator are linked to the 25 REIPPP projects that reached financial close in FY18. All 25 projects received Sovereign Guarantees. |
| | | | Actual | 0 | 0 | 0 | 8 | 17 | 25 | |
| PA17 | US Exports Supplied for Clean and Cleaner Energy Projects (PA) | Program documents | Target | N/A | N/A | N/A | N/A | N/A | N/A | Specific targets are not set for this indicator, but it is tracked and what was exported should be reported. SAEP did not track US exports for FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |
| PA19 | Partner Commitment Tracking (PA) | Program documents | Target | N/A | N/A | N/A | N/A | N/A | N/A | SAEP does not track partner commitments except when asked by PACO. Thus, there are no items to report for this indicator in FY18. |
| | | | Actual | 0 | 0 | 0 | 0 | 0 | 0 | |

# APPENDIX C TRANSACTIONS TRACKER[14]

In Year 1, SAEP's Transaction Advisory Team supported the following projects in support of Program goals. In addition, SAEP initiated conversations with multiple other developers. The outcome of those engagements may result in additional projects being added in Year 2.

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| BPC Solar PV | Botswana | Solar PV | 100 | Providing BPC procurement office advisory services | 30-Apr-20 |
| Mozambique–Malawi | Cross-border | Transmission | 1,000 | ESCOM requested SAEP support on the project and a SOW has been finalized for the following areas:<br>1. Preparation of ESCOM personnel for operating and maintaining a 400-kV transmission system<br>2. Preparation of ESCOM personnel for operating in an interconnected system<br>3. Production optimization<br><br>SAEP has appointed resources who will assist in preparing ESCOM personnel to operate and maintain the interconnected 400 kV transmission system. The ICA for task 1, Mr. Johannes Uys, conducted a Training Needs Assessment with ESCOM and has started to put together the training plan which will include classroom training and practical training. The ICA for task 2 will resume duties on 1 October 2018 and Mr. Mike Barry, the ICA for task 3, has started to engage ESCOM to develop the production optimization tool | 31-Dec-18 |

[14] The transactions presented here are transactions that we are currently designing transaction advisory scopes for or are currently providing targeted transaction support to.

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| ZTK | Cross-border | Transmission | 500 | SAEP received a formal request from OPPPI (signed by the Permanent Secretary of Energy Zambia) soliciting SAEP support on the Zambia–Tanzania–Kenya (ZTK) Interconnector Project. Following consultations with the OPPPI, EU and the WB, a proposal is being developed for SAEP's possible Program Management role in the ZTK project | 31-Dec-19 |
| GBA Swaziland | eSwatini | Solar PV | 30 | The Team concluded Targeted Transaction Support (TTS) on 15 May 2018. The Team's support was focused on increasing the robustness of the project's financial model, in particular how the project's storage component enhances the underlying project economics, while providing the eSwatini Electricity Company (EEC) a level of dispatchability. The client also requested facilitation for interactions with potential financiers, including the Public Service Pension Fund. Project is currently on track, with provisional lease agreements in place for land on privately-owned farms and PPA negotiations at an advanced stage and expected to be finalized by the end of this year, pending agreement on the tariff. EEC has since asked the developer to submit their proposal in response to a tender to be launched this year (dates TBD) and remove the storage component, so the final configuration of the project is unknown | 31-Dec-19 |
| RSSC Grid-Tied Solar PV Plants | eSwatini | Solar | 10 | 30 responses received to RFP, shortlist of four being presented to procurement committee for approval on 26 September 2018 | 30-Jun-19 |
| EWSC solar | eSwatini | Solar PV | 10 | Helping EWSC issue a tender for the IPP provision of solar | 31-Dec-19 |
| EEC Lavumisa solar | eSwatini | Solar PV | 10 | Sourcing finance for two options: a corporate raise to include T&D investments or solar project finance raise for Lavumisa only | 31-Jul-19 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| Lazybend Renewables & DEP | eSwatini | Biomass | 25 | Scheduled a meeting with NERSA for end of July 2018 to discuss LOC and SOW with respect to drafting rules for export and providing regional and global better practice for IPP export as well as SAPP harmonization. Project dependent on export rules being in place in South Africa, SAPP membership for IPPs finalized, and given the Ministry's preference for local biomass, finding offtake north of eSwatini | 31-Dec-20 |
| OnePower Lesotho | Lesotho | Solar | 20 | Finalizing PPA and IA | 31-Mar-19 |
| Baobab plus | Madagascar | SHS | 72,000 connections | The Transaction Advisory Team completed TTS in March 2018. The Team provided analyses and recommendations on sales and distribution strategies, covering areas such as increasing sales agent productivity, optimizing logistics and operations, improving customer credit quality and introduction of a new product to their portfolio | Not applicable<br>Providing support in expanding operations |
| EOSOL | Madagascar | Mini-Grid | 20,600 connections | The Team completed TTS in April 2018, where they developed a financial model to analyze expansion projects for the mini-grid developer and made recommendations on capital sources | Not applicable<br>Providing support in expanding operations |
| Sahofika | Madagascar | Hydro | 192 | The project is being developed by Denham Capital's portfolio company, Themis, as part of a consortium that includes Eiffage and Eranove. The project is structured as a 35-year build-own-operate-transfer (BOOT) with total project cost estimated at US $968 million and financial close expected in Q4 2020 (as at July 2018). SAEP has engaged in preliminary lender conversations for the main project development.<br><br>They have requested SAEP to assist in arranging concessional/grant financing for the ancillary infrastructure that has to be built as part of the project: a 110 km transmission line and a substation, for an incremental value of EUR 60 million. The | 31-Mar-20 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| | | | | ancillary infrastructure is expected to be fully funded by debt and will be structured as a Build-Transfer (BT) contract with the Government of Madagascar, with the asset being operated and maintained by the public utility. TTS for the project is likely to occur in the final quarter of 2018 | |
| Salima Solar PV Project | Malawi | Solar PV | 18 | The project is progressing well. JCM signed the PPA with ESCOM on 14 September 2018. They have mandated OPIC as the MLA, with the loan expected to be credited to JCM by the end of 2018 (amounts TBD). They have applied for viability gap funding from Infraco, however, the outcome is TBD | 31-Dec-18 |
| Golomoti Solar PV Project | Malawi | Solar PV | 18 | JCM signed a PPA with ESCOM on 14 September 2018 for the solar component of the Golomoti project (PPA does not cover the storage component of the project; that may be addressed later in a revised PPA). The USTDA grant to cover costs through financial close (including feasibility, ESIA) was awarded. JCM will begin the overall feasibility study for Golomoti by the end of October 2018<br>The Team will conclude TTS in October 2018, following development of a solar PV plus storage financial model | 30-Jun-19 |
| Lilongwe Solar PV | Malawi | Solar PV | 25 | Following four to five months of having the project stall due to land procurement issues, the developer received the rights to develop the project on a plot of land in early August 2018. The original site was contested and resolution of the land issue comes after months of back-and-forth with the Malawi Investment and Trade Centre (MITC) and Ministry of Lands. The Team worked with the developer, raised the issues to the US Ambassador to Malawi, through USAID/Malawi and was eventually able to | 31-Dec-18 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| | | | | support the facilitation of the engagements required to secure site use | |
| Mpatamanga | Malawi | Hydro | 308 | Serving as the Transaction Advisor to the Government of Malawi (GOM) in the development of the US $700 million Mpatamanga project, which will use an innovative development concept designed by the IFC. The GOM will jointly develop Mpatamanga with the IFC to the point where it can be competitively tendered out to the market as a fully-termed, non-negotiable project. The Team has supported multiple work streams on this project including:<br>• Establishment of the Task Force comprising Government representatives, the Public-Private Partnership Commission (PPPC) of Malawi, EGENCO and ESCOM<br>• Drafting and approval by Cabinet of a paper motivating for the Government's support of the project<br>• Global Infrastructure Facility (GIF) funding application for US $4 million to cover development costs (Outcome TBD)<br>• Selection of the Specialist Developer to lead early stage development on the IFC's behalf<br>• Procurement of a legal advisor to represent the GOM in negotiation of the Joint Development Agreement (JDA) with the IFC | 31-Dec-21 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| Namaacha | Mozambique | Wind | 120 | The Team began providing TTS to EleQtra, the developer, in July 2018. Support has entailed building out the financial model (with considerations of local tax incentives, PPP profit sharing, licensing costs and fees, mezzanine debt). Support is expected to be concluded in October 2018. As at September 2018, the project has been awarded US $2 million in USTDA grants and US $400,000 from AfDB for use during the 2018 calendar year. The developer is also looking to launch an RFP for an equity partner in the next few months | 31-Dec-20 |
| SolarWorks! | Mozambique | SHS | TBD | The Team concluded TTS to SolarWorks! in August 2018. SolarWorks! is a SHS distributor looking to expand its business to include a data platform/credit rating system using the user and credit data generated from its predominantly rural client base, to increase financial inclusion and cross-sale of other relevant products and services | Not applicable Providing support in expanding operations |
| Temane Transmission | Mozambique | Transmission | 900 | In January 2018, SAEP appointed an embedded project coordinator for EDM. The coordinator continues to manage and coordinating the TTP and its interface to the Temane 900 MW IPP project | 31-Dec-19 |
| Wonderkop Smelter | South Africa | Energy Efficiency | 45 | Feasibility study is under way (eight weeks) in respect of upgrading the heat extraction. Once completed, detailed design and project contract negotiations will commence | 31-Oct-19 |
| LNG to Power- Coega and Richards Bay | South Africa | Natural Gas | 3,000 | Awaiting South African Government policy. The "Power Africa Natural Gas Roadmap for Southern Africa" has been developed to guide SAEP in supporting Southern Africa Gas activities. The Roadmap identified LNG to Power, along with broader gas industrialization agenda in South Africa | 1-Jul-20 |
| Rooftop Solar Portfolio | South Africa | Solar | 22 | Project funding (section 12J structure) being finalized | 31-Dec-18 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| Renewable Energy Independent Power Project Procurement Program (REIPPP) | South Africa | Solar PV | 175 | SAEP is providing technical assistance. Megawatt estimates based on latest figures from REIPPP estimates for financial close. Two transactions (Loeriesfontein Orange 75 MW & Redstone Thermal Power Project: 100 MW) are pending financial close and 25 transactions with a total of 2130.38 MW reached financial close this quarter | TBD |
| Mondi - Biomass / Cogen Richards Bay plant | South Africa | Biomass | 72 | Following Eskom's announcement that STPPP PPAs would not be renewed (effective April 2017) Mondi has pursued opportunities to sell their power at a rate and term better than the regulated Megaflex tariff offered by the municipality | 2020 if SAPP & NERSA work takes a year |
| EDF-Innowind: Scarlet Ibis | South Africa | Wind | 15 | Approached IDC and there is interest but may be too big to provide the full amount of project finance debt | 1-May-19 |
| City of Cape Town | South Africa | Solar PV | 10 | In the process of signing an LOC and finalizing SOW to analyze various utility models for rooftop PV rollout | 1-Oct-19 |
| District Power | South Africa | Gas | 8 | Negotiating with Cogen host | 1-Jun-19 |
| Solar Reserve Urban Solar Farm | South Africa | Solar PV | 10 | Providing legal advisory support to review PPA | 1-Sep-19 |
| Sunelex with Municipal & PowerX PPA | South Africa | Solar PV | 66 | 200 MW (three phases of 66.66 MW each) offtaker for internally-consumed portion is Matjhabeng Municipality, with surplus power to be taken up by PowerX or other bilaterals. The government, via a PPP-based guarantee from National Treasury, will provide security for the 20-year PPA between Matjhabeng and Sunelex. Providing commercial support in the development of a term sheet and introducing the project to four large developers to help Sunelex sign a JDA to secure the necessary finance to get the project over the line | 31-Mar-19 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| Access Power | Zambia | Wind | 130 | The Team remains in frequent communication with the developer, although the developer is yet to define a scope of support. The project is advancing and there have been no requests made for insights into impending regulator reforms and action | 30-Sep-19 |
| Unika Wind (Mpepho Power) | Zambia | Wind | 150 | The Team provided a series of market intelligence briefs on the Zambian market with particular focus on the probability of securing desired government guarantees and an assessment on ZESCO's current credit situation. As at the close of Q3, the developer had signed an MOU to secure the rights to develop projects on the land, and to provide the necessary servitudes for the projects. Met masts have yet to be installed but lidar is being investigated until a funder is in place; the developer hopes to get the WB's met mast data from the Petauke site 50 – 80 km away | 30-Sep-21 |
| AMEA Power Wind Zambia | Zambia | Wind | 100 | AMEA received a Letter of Exception from the Zambia Public Procurement Authority (ZPPA) in June 2018, granting them exclusivity to their feasibility study and preventing it from being tendered out to market as the country's procurement law requires. The letter typically takes anything between two and six months to secure, slowed down by the lack of clear guidelines/protocols, but AMEA was able to get theirs in under two months being advised by the Zambia Country Manager and the Transaction Advisory Team.<br>The Regional Manager for Southern Africa met with the Principal Secretary of Energy, accompanied by the SAEP Country Manager, in mid-July to kick-start the activities towards the wind feasibility study.<br>AMEA have already identified a location and will be putting up the met mast and initiating tests | 31-Mar-21 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| Gigawatt Global Wind | Zambia | Hybrid: Solar/wind | 71 | The Team remains in frequent communication with the developer; however, there are few developments. The developer signed an MOU with the government and ZESCO in early 2018 and were planning on signing an agreement with the site land owner. However, negotiations to secure the land have been slow, due to competition from some of the GET FiT developers. They had planned to issue the RFP for the multidisciplinary feasibility study in May 2018, but have put the project on hold until they can get exclusivity to their feasibility rights (the MOU only allows them to commence the study) | 30-Sep-20 |
| Vitalite SHS | Zambia | SHS | TBD | Vitalite were selected by PFAN to receive further support in developing their business plan and investor pitch and won the off-grid category at the 31 May PFAN Investor Forum in Nairobi. They have requested the Team to support their upcoming fundraising roadshow and equity restructuring of the company. These steps are necessary to support further regional expansion, to include potential expansion into Zimbabwe through a joint venture with a telecommunications player | Not applicable<br>Providing support in expanding operations |
| GET FIT Zambia | Zambia | Hydro | 100 | The Energy Regulation Board (ERB) requested technical assistance in determining feed-in tariffs for mini-hydro projects, for the second 100 MW round of GET FiT Zambia. The Transaction Team has co-developed the tariff model and compiled a comprehensive user manual documenting the development of the model and the rationale behind selecting certain values for inputs. A large emphasis has been placed on developing the user manual in close collaboration with the ERB counterpart, in order to ensure capabilities are being built within the ERB to perpetuate this work. The Team also supported the ERB in presenting the findings to relevant stakeholders the week of 24 September | 31-Dec-20 |

| Project Name | Country | Technology | Project Size [MW] | Current Status | Estimated Financial Close Date |
|---|---|---|---|---|---|
| | | | | 2018 in Lusaka with wider stakeholder engagement planned for October 2018. GET FiT Round II is expected to be launched in November 2018 | |

# APPENDIX D TRANSACTIONS REACHED FINANCIAL CLOSE

| Code | Project Name | Country | Technology Used | MW | Project Sponsor | Financial Intermediary | Date of Financial Closing | Risk Mitigation Tools | Female Ownership |
|---|---|---|---|---|---|---|---|---|---|
| TR-SA-036 | Aggeneys Solar | South Africa | Solar PV | 40.00 | Biotherm | Nedbank | 23-Jul-18 | Sovereign Guarantee | No |
| TR-SA-063 | Bokamoso Solar Park | South Africa | Solar PV | 67.90 | SunEdison | ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-094 | Copperton Wind Farm | South Africa | Wind | 102.00 | Gestamp | Standard Bank | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-062 | De Wildt Solar Park | South Africa | Solar PV | 50.00 | SunEdison | ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-061 | Droogfontein 2 Solar Park | South Africa | Solar PV | 75.00 | SunEdison/Old Mutual | Nedbank | 23-Jul-18 | Sovereign Guarantee | No |
| TR-SA-100 | Dyason's Klip 1 | South Africa | Solar PV | 75.00 | Scatec Solar | Standard Bank | 4-Apr-18 | Sovereign Guarantee | No |
| TR-SA-101 | Dyason's Klip 2 | South Africa | Solar PV | 75.00 | Scatec Solar | Standard Bank | 4-Apr-18 | Sovereign Guarantee | No |
| TR-SA-034 | Excelsior Wind | South Africa | Wind | 31.90 | Biotherm | Nedbank | 23-Jul-18 | Sovereign Guarantee | No |
| TR-SA-099 | Garob Wind Farm | South Africa | Wind | 135.90 | Enel | Nedbank/ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-033 | Golden Valley Wind | South Africa | Wind | 117.72 | Biotherm | Nedbank | 23-Jul-18 | Sovereign Guarantee | No |
| TR-SA-058 | Greefspan PV Power Plant No. 2 Solar Park | South Africa | Solar PV | 55.00 | AE AMD/ SunEdison | ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-024 | Kangnas | South Africa | Wind | 136.70 | Lekela/Mainstream | ABSA | 30-May-18 | Sovereign Guarantee | No |
| TR-SA-020 | Karusa Wind Farm | South Africa | Wind | 139.80 | Enel | Nedbank/ABSA | 31-Jul-18 | Sovereign Guarantee | No |

| Code | Project Name | Country | Technology Used | MW | Project Sponsor | Financial Intermediary | Date of Financial Closing | Risk Mitigation Tools | Female Ownership |
|---|---|---|---|---|---|---|---|---|---|
| TR-SA-035 | Konkoonsies II Solar | South Africa | Solar PV | 75.00 | Biotherm | Nedbank | 23-Jul-18 | Sovereign Guarantee | No |
| TR-SA-098 | Kruisvallei Hydro | South Africa | Hydro | 4.70 | H1 Capital, Building Energy | RMB | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-097 | Ngodwana Energy | South Africa | Biomass | 25.00 | Sappi | Nedbank/ABSA | 12-Apr-18 | Sovereign Guarantee | No |
| TR-SA-067 | Nxuba Wind Farm | South Africa | Wind | 138.90 | Enel | Nedbank/ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-021 | Oyster Bay Wind Farm | South Africa | Wind | 140.00 | Enel | Nedbank/ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-025 | Perdekraal East | South Africa | Wind | 107.76 | Mainstream | ABSA | 30-May-18 | Sovereign Guarantee | No |
| TR-SA-066 | Roggeveld | South Africa | Wind | 140.00 | Building Energy | RMB | 4-Apr-18 | Sovereign Guarantee | No |
| TR-SA-095 | Sirius Solar PV Project One | South Africa | Solar PV | 75.00 | Scatec Solar | Standard Bank | 4-Apr-18 | Sovereign Guarantee | No |
| TR-SA-022 | Soetwater Wind Farm | South Africa | Wind | 139.40 | Enel | Nedbank/ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-043 | Waterloo Solar Park | South Africa | Solar PV | 75.00 | SunEdison | ABSA | 31-Jul-18 | Sovereign Guarantee | No |
| TR-SA-023 | Wesley-Ciskei Wind Project | South Africa | Wind | 32.70 | Innowind | Standard Bank | 4-Apr-18 | Sovereign Guarantee | No |
| TR-SA-041 | Zeerust Solar Park | South Africa | Solar PV | 75.00 | SunEdison/Old Mutual | Nedbank | 31-Jul-18 | Sovereign Guarantee | No |
| **TOTAL** | | | | **2,130.38** | | | | | |

# APPENDIX E PARTICIPANT TRAINING REPORT

| Country | Training & Capacity Building Activity | Date | Number of Male | Number of Female | Total Number of participants | Hours of Training | Person-Hours of Training |
|---|---|---|---|---|---|---|---|
| eSwatini | Southern African Power Pool EXCO Workshop: eSwatini | 21-Mar-18 | 28 | 2 | 30 | 6 | 180.0 |
| Malawi | Attracting IPPs to Malawi Energy Sector | 30-Jan-18 | 23 | 6 | 29 | 5 | 145.0 |
| Malawi | Operations Division: EGENCO Monitoring and Evaluation Activity KPI Formulation Workshop | 24-Jul-18 | 19 | 1 | 20 | 7 | 140.0 |
| Malawi | Finance Division: EGENCO Monitoring and Evaluation Activity KPI Formulation Workshop | 25-Jul-18 | 11 | 3 | 14 | 7 | 98.0 |
| Malawi | Planning and Development Division: GENCO Monitoring and Evaluation Activity KPI Formulation Workshop | 26-Jul-18 | 16 | 2 | 18 | 7 | 126.0 |
| Namibia | Mini-Grids and Rural Electrification | 18-Jul-18 | 13 | 1 | 14 | 8 | 112.0 |
| Namibia | Hybrid Mini-Grid Operations and Concepts | 19-Jul-18 | 11 | 1 | 12 | 8 | 96.0 |
| Regional | SAPP Market Subcommittee Workshop on Balancing Market Development | 8-Aug-18 | 19 | 7 | 26 | 24 | 624 |
| Zambia | Geospatial Model Workshop | 20-Mar-18 | 33 | 22 | 55 | 7 | 385.0 |
| Zambia | Connection Agreements and System Planning | 31-May-18 | 12 | 0 | 12 | 7 | 84.0 |
| Zambia | Geospatial Model Training and Handover: Department of Energy | 6-Jun-18 | 12 | 3 | 15 | 2.5 | 37.5 |
| Zambia | Water Values for ZESCO Hydro Generation | 14-Sep-18 | 6 | 1 | 7 | 2 | 14.0 |
| Zambia | Geospatial Model Training | 29-Aug-18 | 14 | 0 | 14 | 4 | 56.0 |
| **Total** | | | **217** | **49** | **266** | **94.5** | **2,097.5** |

Figures 2 and 3 present FY18 training and capacity building results against FY18 training and capacity building targets.

***Figure 2: Number of Person-hours of Training***

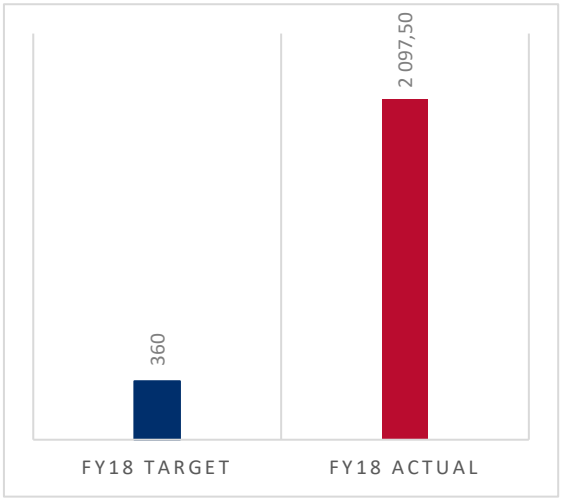



***Figure 3: Number of People Receiving Training in Global Clean Energy***

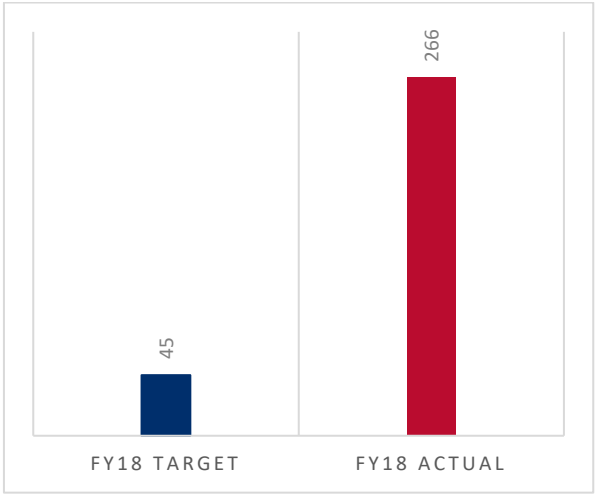
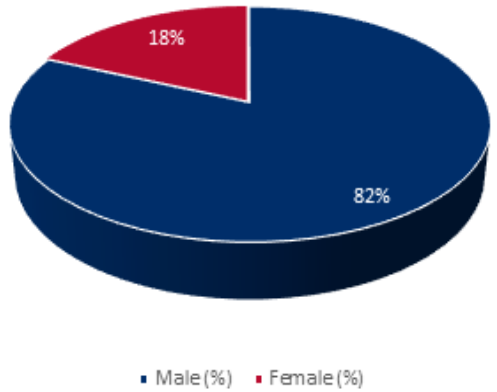



Figure 4 shows the percentages of male and female participants who attended SAEP organized training and capacity activities in Year 1.

***Figure 4: SAEP Gender Training and Capacity Building Activities***



# APPENDIX F ASSUMPTIONS FOR CALCULATION AND INVOICING OF FEE

Pursuant to section B.3 (f) of the SAEP contract, Deloitte is including earned fee on the periodic invoice immediately following the COR's final acceptance of the SAEP Quarterly Progress Report (QPR). Each quarter's earned fees do not exceed one-twentieth (5%) of the total fixed fee amount, or $242,427 per quarter. This includes a maximum of $151,517 for timely submission of all required deliverables during the quarter (Output Indicator #X) and $90,910 for meeting quarterly targets for three Impact Indicators (#Y, #AA, and #AB).

COR acceptance of the QPR will constitute acceptance of the performance indicator values included in the Performance Monitoring and Evaluation Tables presented as an Appendix to that report. With the exception of the first QPR, which covered the period from program award to 30 June 2017, QPRs will follow the US Government's fiscal year.

## RECONCILIATION OF DISPARATE PROGRAM CALENDARS

At the request of USAID, Deloitte prepared the SAEP Year 1 Work Plan that covers the period from program award (15 March 2017) through the end of US Government Fiscal Year (30 September 2018). While this simplifies planning and reporting by aligning Program years to the US Government fiscal calendar, it also has the effect of extending SAEP's Year 1 to just over six fiscal quarters.

From Program Year 2 onward, the calendars for QPR reporting, invoicing of fee, and the Government fiscal year will all coincide. This will result in Year 5 being an abbreviated performance year, with just under two quarters for program reporting and invoicing of fee.

## TREATMENT OF QUARTERLY AND ANNUAL PERFORMANCE TARGETS

As indicated in the approved SAEP PMEP, target values for the four *Impact Indicators* are set on an annual basis. For purposes of quarterly reporting and calculation of fee, incremental performance targets for Quarters 1, 2 and 3 of each Program year are set at zero, and with Quarter 4 of the Program year carrying the full annual performance target. In the event Deloitte does not meet the annual performance target, fee may not be invoiced in subsequent quarters until that target is met. That is, Deloitte may not begin invoicing fee in Q1 of Year 2 if the annual performance target for Year 1 has not been met, even though the *incremental* performance target for the quarter is zero. Figure 5 below summarizes the quarterly impact indicator targets for SAEP's Year 1.

***Figure 5: Quarterly Impact Indicator Targets, Program Year 1***

| Indicator | Disaggregation | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Total | Baseline & Rationale |
|---|---|---|---|---|---|---|---|---|
| #AA: Capacity (MW) from transactions supported by SAEP that achieved financial closure | • ***Country***<br>• ***Technology (separating transmission from generation)***<br><br>****note when female ownership in*** | 0 | 0 | 100 | 200 | 25 | 325 | 0; targets based on transaction pipeline and experience with financial closure timelines and probabilities (includes transmission and generation capacity) |

| Indicator | Disaggregation | FY17 Q3 & FY17 Q4 | FY18 Q1 | FY18 Q2 | FY18 Q3 | FY18 Q4 | Total | Baseline & Rationale |
|---|---|---|---|---|---|---|---|---|
| | ***developer consortium*** | | | | | | | |
| #AB: Direct Electricity Access: Number of new grid and off-grid actual direct connections | ***• Type of connection*** ***• Type of enterprise*** ***• Country*** | 0 | 0 | 0 | 0 | 0.05 | 0.05 | 0; number of new grid connections of off-grid access directly enabled based on OC4 technical work plan with implementation priority countries |
| #Y: Number of laws, policies, strategies, plans, or regulations, officially proposed, adopted, or implemented | ***• Country*** ***• Measure (Clean Energy standard)***[15] | 0 | 1 | 0 | 2 | 3 | 6 | 0; targets set based on anticipated need for relevant laws, policies, strategies, plans or regulations in the region |
| #X: Submission of required deliverables as per Section F of the Contract | ***• Type and # of reports*** ***• Submitted or not submitted timely*** | 100% | 100% | 100% | 100% | 100% | 100% | 0; For all Section F deliverables not including the trip reports and other reports which will be estimated later |
| #Z: Generation and Transmission capacity (MW) pending financial closure | ***Country*** ***• Technology/ energy source*** ***• Transaction Stage*** ****note female ownership*** | 410 | 205 | 205 | 205 | 205 | 1230 | Indicator measures new transactions added to the pipeline to equate to the total amount in the pipeline. |

## SETTING OF ANNUAL TARGETS IN SUBSEQUENT PROGRAM YEARS

Recognizing the importance of balancing accountability with changing conditions over the extended period of performance, Deloitte and USAID/Southern Africa have agreed to set performance targets for select indicators annually. To enable flexibility while maintaining accountability and intended incentives, Deloitte submitted proposed annual targets for Year 2 with the Year 1 Q3 Quarterly Progress Report. USAID/Southern Africa's acceptance of the Q3 Quarterly Progress Report constitutes acceptance of proposed performance targets.

## RECOVERING FEE IN THE EVENT OF UNDERPERFORMANCE IN A REPORTING PERIOD

Pursuant to B.3 (f) (5) of the USAID SAEP contract (AID-674-C-17-00002), fee amounts unbilled in a given period due to underperformance against targets are not permanently forfeited. With COR approval, these fees may be recovered in subsequent periods, when Deloitte returns to meeting or exceeding quarterly or year-to-date performance targets.

[15] Disaggregation: Drafted, Presented, Regional, National, Private Sector Participation, Clean and Cleaner Energy, Small-Scale and Off-Grid Investments, Gender Equity and Country

# APPENDIX G STTA MOBILIZED AND TRAVEL TAKEN IN Q4 FY18

STTA mobilized during the period of 1 July 2019 to 30 September 2018

| Resource | Activity / Scope | Est. Start Date | Est. End Date |
|---|---|---|---|
| **Johannes Uys** | **Power Utility Transmission & Distribution Advisor.** Mr. Uys provides capacity building technical assistance for ESCOM's operations and maintenance staff | 24 July 2018 | 31 January 2019 |
| **Christine Covington** | **Procurement Expert.** Ms. Covington continues to provide technical support to the Botswana Power Corporation | 4 June 2018 | 29 June 2018 |
| **Nick Van Hollen** | **Modeler.** Mr. Van Hollen works with CENORED to develop model architecture, refine according to user needs and collect data inputs | 17 September 2018 | 28 September 2018 |

SAEP team travel between 1 July and 30 September 2018

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **4 – 7 July 2018** | Abidjan, Cote d'Ivoire | Jorry Mwenechanya | To attend the AfDB launch for the Africa Energy Market Place |
| **17 July – 8 August 2018** | Pretoria, South Africa | Jenny Huang | To provide PMO support of Year 2 work planning, gender integration, grants and OC 5 activities |
| **9 – 13 July 2018** | Windhoek, Namibia | Tshegofatso Neeuwfan | To attend kick-off activities related to a battery storage initiative with CENORED |
| **3 – 5 July 2018** | Maputo, Mozambique | Wayne Mikutowicz | To attend meetings with EDM |
| **24 – 26 July 2018** | Lusaka, Zambia | Wayne Mikutowicz | To attend a meeting with ZESCO for customer backlog assistance |
| **30 – 31 July 2018** | Maputo, Mozambique | Wayne Mikutowicz | To attend meeting with EDM |
| **2 – 5 July 2018** | Windhoek, Namibia | Craig VanDevelde | To provide a more detailed briefing to the new US Ambassador on SAEP, to have meetings with counterparts and help build scopes of work |
| **24 – 26 July 2018** | Lusaka, Zambia | Stefan Freeman<br>Frederik Benzel | To attend meeting with ZESCO on customer backlog assistance |

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **3 – 5 July 2018**<br>**24 – 26 July 2018** | Lusaka, Zambia | Hendrik Pelser | To attend follow-up meetings with ZESCO on ERB REFIT Modelling |
| **24 – 25 July 2018** | Lusaka, Zambia | Izak Du Plessis | To attend meetings with ZESCO to discuss the backlog inception report with the EXCO |
| **7 – 11 August 2018** | Maseru, Lesotho | Izak Du Plessis | To attend the LEC Board of Directors meeting and to meet with the LEC Managing Director for the LEC Board approval of the second and third phase of the LEC Strategic Plan |
| **20 – 24 August 2018** | Maseru, Lesotho | Izak Du Plessis | To meet with LEC executives to provide technical assistance on the development of the strategic plan |
| **24 July – 1 August 2018** | Lusaka, Zambia | Rajiv Weeraratne | To coordinate the setting up of the SAEP Lusaka office |
| **8 – 13 July 2018** | Maputo, Mozambique | Stefan Freeman<br>Frederik Benzel<br>Sean Rosenberg | For transaction advisory on solar works |
| **2 – 30 July 2018** | Lilongwe, Malawi | Adam Kendall<br>Harald Poeltner<br>Kannan Lakmeeharan<br>Tombo Banda<br>Jessica Standish-White<br>Chania Frost | To complete work on activities under OC2 and OC4 in Malawi which will encompass the entire Malawi country diagnostics, sector assessments and working groups across OC2 and OC4 |
| **1 – 30 July 2018** | Lusaka, Zambia | Laurence de l'Escaille<br>Kannan Lakmeeharan<br>Jessica Standish-White<br>Archbald Mwangi<br>Nikhil George | To complete work on activities under OC4. The McKinsey team's work in Zambia will encompass the entire Zambia country assessment across OC4, including technical assistance to support ZESCO and ERB in continued development of a national IRP and improving overall commercial viability of the utility. The team will also work with ZESCO, REA, and the Ministry of Energy & Water Development to build capabilities related to facilitating increased investment in grid, micro-grid and off-grid systems. The McKinsey team will also support the Zambia Country Diagnostic Working Groups for OC4 |

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **23 – 27 July 2018** | Blantyre, Malawi | Vincenzo Micali | To meet with EGENCO to continue work under Performance Management Task 2 Part 2 as per SOW |
| **15 July – 5 August 2018** | Pretoria, South Africa<br>Lilongwe, Malawi<br>Mbabane, eSwatini | Raj Addepalli | To support MERA on tariff review, to meet EEC, MNRE, EWSC, ESERA and other stakeholders on net metering and to meet SAEP team to touch base |
| **23 – 25 July 2018** | Mbabane, eSwatini | Jorry Mwenechanya<br>Ria Govender<br>John Less<br>Maria Mbengashe<br>Elias Sethosa | To meet with EEC, MNRE, EWSC and ESERA for an update on the vRE integration study, update on the Procurement toolkit submission to eSwatini cabinet and establishment of the Procurement Unit, update on the Solar tender evaluation process and discussion on net metering / embedded generation framework among other activities<br>To transport the team to eSwatini and provide logistical support in eSwatini |
| **17 – 20 July 2018** | Maputo, Mozambique | Peter Stopher<br>Hendrik Pelser | To attend a kick-off meeting for accelerating the Namaacha Wind Project |
| **22 July – 19 August 2018** | Pretoria, RSA<br>Lusaka, Zambia<br>Lilongwe & Blantyre, Malawi | Willem Theron | To attend meetings with ESCOM, MCC, MCA and Andy Spahn (USAID).<br>To attend meetings with ESREM, OPPPI and ZESCO. He also travelled to Maputo to meet EDM on the Zimbabwe-Mozambique interconnector |
| **9 – 14 August 2018** | Lilongwe & Blantyre, Malawi | Johannes Uys | To attend meetings with ESCOM, MCC, MCA and Andy Spahn (USAID); to assist ESCOM on the operation of the 400kV line and to conduct training that will ensure that the handover of the project from MCC to ESCOM is successful |
| **6 – 10 August 2018** | Blantyre, Malawi | Vincenzo Micali<br>Wayne Mikutowicz<br>Arthur Wengawenga | To attend a meeting with EGENCO to continue work under Performance Management Task 2 Part 3 as per SOW |
| **21 – 22 August 2018** | Gaborone, Botswana | Wayne Mikutowicz | To attend a meeting with BPC |

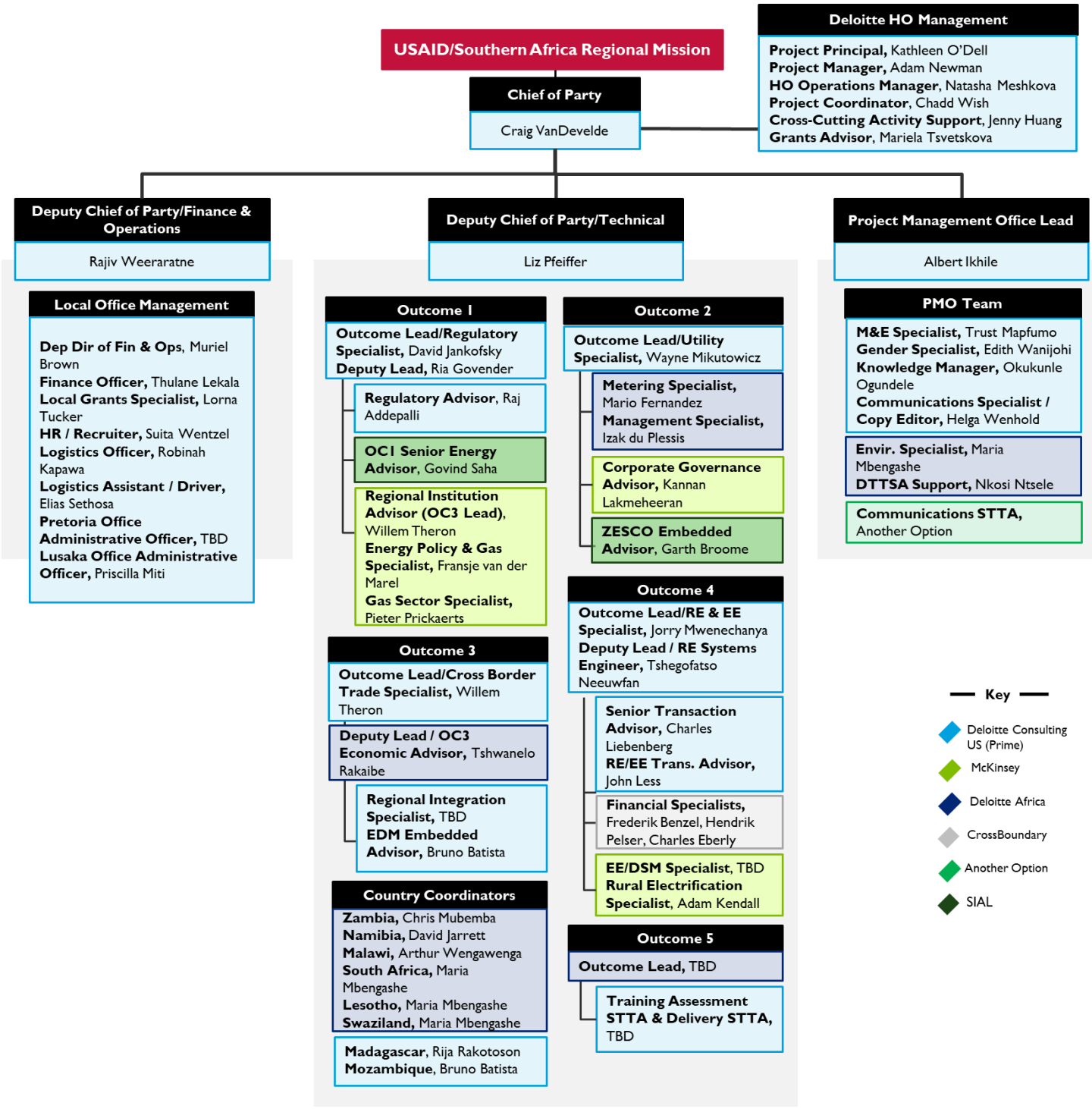
| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **27 – 29 August 2018** | Maputo, Mozambique | Wayne Mikutowicz | To attend a meeting with EDM |
| **30 July – 1 August 2018** | Windhoek, Namibia | Liz Pfeiffer | To present on gas at the SADC's industrialization conference |
| **30 July – 30 August 2018** | Lilongwe & Blantyre, Malawi | Adam Kendall<br>Harald Poeltner<br>Kannan Lakmeeharan<br>Tombo Banda<br>Jessica Standish-White<br>Chania Frost | To complete work on activities under OC2 and OC4 in Malawi which will encompass the entire Malawi country diagnostics, sector assessments and working groups across OC2 and OC4 |
| **30 July – 30 August 2018** | Lusaka, Zambia | Laurence de l'Escaille<br>Kannan Lakmeeharan<br>Tombo Banda<br>Jessica Standish-White<br>Archbald Mwangi<br>Nikhil George<br>Pedro Gutierrez | To complete work on activities under OC4. The McKinsey team's work in Zambia will encompass the entire Zambia country assessment across OC4, including technical assistance to support ZESCO and ERB in continued development of a national IRP and improving overall commercial viability of the utility. The team will also work with ZESCO, REA, and the Ministry of Energy & Water Development to build capabilities related to facilitating increased investment in grid, micro-grid and off-grid systems. The McKinsey team will also support the Zambia Country Diagnostic Working Groups for OC4. |
| **9 – 15 August 2018** | Pretoria, South Africa<br>Lilongwe & Blantyre, Malawi | Willem Theron<br>Tshwanelo Rakaibe<br>Johannes Uys | To attend meetings with ESCOM on the Mozambique-Malawi interconnector. |
| **12 – 14 August 2018** | Blantyre, Malawi | Arthur Wengawenga | To attend meetings with ESCOM on the Mozambique-Malawi interconnector. |
| **22 – 24 August 2018** | Lusaka, Zambia | Hendrik Pelser<br>Charles Eberly | For Transaction Advisory on GET FiT Round II and ERB REFIT Modelling |
| **10 – 14 September 2018** | Maputo, Mozambique | Hendrik Pelser | For Transaction Advisory on Namaacha Wind Project |

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **15 – 17 August 2018** | Lilongwe, Malawi | Charles Eberly<br>Busiswa Vilakazi | To attend meetings with the Task Force Chair on the Mpatamanga Hydropower Project |
| **28 – 30 August 2018** | Lilongwe, Malawi | Charles Eberly<br>Busiswa Vilakazi<br>Sebastian Deschler | To attend meetings with the Task Force Chair on the Mpatamanga Hydropower Project |
| **15 – 18 August 2018** | Lilongwe, Malawi | Jorry Mwenechanya | To engage stakeholders for the Mpatamanga Hydropower Project. |
| **7 – 9 August 2018** | Lilongwe, Malawi | Liz Pfeiffer | To attend the Mpatamanga Taskforce meeting, Endev and counterpart meetings |
| **20 – 23 August 2018** | Lusaka, Zambia | Liz Pfeiffer | To discuss the year 2 work plan with cooperating partners and to touch base with the technical delivery team |
| **2 – 19 September 2018** | Pretoria, South Africa<br>Maputo, Mozambique | Jose Cavaretti | To continue work on the Community Engagement activity with EDM and to meet with the SAEP team in Pretoria |
| **15 – 16 August 2018** | Maseru, Lesotho | Maria Mbengashe<br>Wayne Mikutowicz<br><br>Elias Sethosa | To present the Training Needs Assessment report to LEC<br><br>To transport the team to and from Maseru and to provide logistical support in Maseru |
| **29 August – 1 September 2018** | Lusaka, Zambia | Rajiv Weeraratne | To finalize the setting up of the SAEP Zambia office |
| **28 September – 31 October 2018** | Regional | David Jankofsky | To continue implementation of the OC1 Year 1 Work Plan activities and to start the implementation of Year 2 Work Plan activities |
| **17 – 22 September 2018** | Windhoek & Otjiwaronga, Namibia | Tshegofatso Neeuwfan<br>Nick Van Hollen | To attend battery storage and electrification follow-up meetings for CENORED and City of Windhoek activities |

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **26 – 28 September 2018** | | | |
| **5 – 8 September 2018** | Johannesburg, South Africa | Willem Theron | To attend meetings with IDC, DBSA and Mott MacDonald |
| **23 – 29 September 2018** | Lilongwe, Malawi | Charles Eberly<br>Sebastian Deschler<br>Jorry Mwenechanya | To attend meetings with Mpatamanga Hydropower Project with the Taskforce |
| **17 – 21 September 2018** | Lilongwe & Blantyre, Malawi | Charles Liebenberg | To attend meetings with Illovo Sugar, Agricane and Phanes |
| **10 – 13 September** | Mbabane, eSwatini | Charles Liebenberg | To attend meetings with EEC and RSSC |
| **27 September** | Maputo, Mozambique | Charles Liebenberg | To meet with Victor Mallett on the Nacala LNG Project |
| **3 – 28 September 2018** | Lilongwe & Blantyre, Malawi | Adam Kendall<br>Harald Poeltner<br>Kannan Lakmeeharan<br>Jessica Standish-White<br>Chania Frost<br>Shazia Shariff | To complete work on activities under OC2 and OC4 in Malawi which will encompass the entire Malawi country diagnostics, sector assessments and working groups across OC2 and OC4 |
| **3 – 29 September 2018** | Lusaka, Zambia | Laurence de l'Escaille<br>Kannan Lakmeeharan<br>Tombo Banda | To complete work on activities under OC4. The McKinsey team's work in Zambia will encompass the entire Zambia country assessment across OC4, including technical assistance to support ZESCO and ERB in continued development of a national IRP and improving overall commercial viability of the utility. The team will also work with ZESCO, REA, and the Ministry of Energy & Water Development to build capabilities related to facilitating increased investment in grid, micro-grid and off-grid systems. The McKinsey team will also support the Zambia Country Diagnostic Working Groups for OC4. |
| **3 – 7 September 2018** | Blantyre, Malawi | Vincenzo Micali | To attend a meeting with EGENCO and to continue M&E work under Performance Management Task 2 Part 3 & 4 as per SOW |

| Dates | Location | SAEP Attendees | Plans / Meetings |
|---|---|---|---|
| **10 – 12 September 2018** | Lilongwe, Malawi | Arthur Wengawenga<br>Wayne Mikutowicz | |
| **16 – 18 September 2018** | Maputo, Mozambique | Wayne Mikutowicz | To attend a meeting with EDM on electrification activities |
| **24 – 25 September 2018** | Blantyre, Malawi | Wayne Mikutowicz<br>Arthur Wengawenga | To attend a meeting with the ESCOM Director of Distribution |
| **10 – 12 September 2018** | Maseru, Lesotho | Izak Du Plessis | For LEC Strategic Plan Finalization |
| **30 September – 9 October 2018** | Antananarivo, Madagascar | Tshegofatso Neeuwfan<br>Liz Pfeiffer | For the signing of the LOC and OC4 rural electrification activities |
| **25 – 28 September 2018** | Lilongwe & Blantyre, Malawi | Tshwanelo Rakaibe<br>Willem Theron<br>Michael Barry | To attend meetings with ESCOM to kick-start production optimization activities |
| **17 – 19 September 2018** | Blantyre, Malawi | Arthur Wengawenga | To attend meetings with EGENCO on M&E assistance |
| **24 – 28 September 2018** | Lusaka, Zambia | Hendrik Pelser | For Transaction Advisory on GET FiT Round II and ERB REFIT Modelling workshop |

# APPENDIX H ORGANIZATIONAL CHART & RESOURCES




The above organizational chart is as at 30 September 2018.

# APPENDIX I DETAILED ACTIVITIES PROGRESS

## OUTCOME–SPECIFIC ACTIVITIES

Below are the outcome-specific activities from the Year 1 Work Plan. This table is to track the status of the activities and to highlight any activity changes, timing changes or other major items related to activities that SAEP would like to highlight for the period.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Intervention 1.01** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Assist ERB with RIA compliance and additional capacity building requested by the ERB, in conjunction with NARUC activities**<br>**Y1.01.01.01.ZMB** | David Jankofsky | 1/15/2018 – 2/15/2018 | ERB request | | Formal training on conducting RIAs<br>Memorandum for reference | Completed. SAEP developed a memorandum explaining RIA requirements and how BRRA would accept existing ERB process in fulfillment of BRRA requirements |
| **Assist ERB with licensing issuance and monitoring (focus on IPP licensing)**<br>**Y1.01.01.02.ZMB** | David Jankofsky | Moved to Year 2 pending ERB decisions | ERB request | OC1.04 | Evaluation of existing licensing procedures<br>Training on licensing requirements generally<br>Specific training on issuance of IPP licenses<br>Training and templates in licensee monitoring requirements | Delayed and will roll into Year 2. Discussions underway with the ERB on the specifics that they would like this assistance to entail. The EU/IFC are currently reviewing licensing for off-grid activities and the ERB is laying out which license processes they would like SAEP to review |
| **ERB capacity building in evaluation of expenses and investments (in coordination with AfDB for ZESCO reform work and PATRP embedded advisor MOF)** | David Jankofsky | 6 months from time ZESCO files rate case | To support AfDB and PATRP | OC2.04 | Formal training in tariff reviews<br>Technical assistance in production of guidelines for utilities | Activity delayed and will roll into Year 2. Will commence when ZESCO files its rate case |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.01.01.03.ZMB** | | | | | | |
| **Define ERB role in procurement activities of ZESCO**<br>**Y1.01.01.06.ZMB** | IPP Specialist (OC1 Deputy) | 1.5 months | Leading practice | | Recommendations on process for procurement activities | Delayed and will roll into Year 2. Discussions underway with the ERB on the specifics that they would like this assistance to entail |
| **Support ERB to build standard PPAs and broader framework for mini-hydro and biomass**<br>**Y1.01.01.07.ZMB** | IPP Specialist | 1/1/2018 – 9/30/2018 | ERB request | OC1.04, OC4.01 | Framework to consider:<br>· Assessment of potential sites for mini grids<br>· Concession (or license) Agreement templates<br>· PPAs and pricing (using recently adopted hydro REFIT PPA;)<br>· Implementation Agreement template if needed (probably Interconnection Agreement required if on grid)<br>· Analysis of utilization of existing funding sources | Activity was modified to focus first on ERB hydro REFIT assistance with KfW for the GET Fit program. The hydro PPA work was covered by KfW and a similar model for biomass can be used and if prioritized by ERB will be moved into Year<br>OC1 Lead reviewed the concession agreement/license for mini-grids this year as well |
| **NAMIBIA** | | | | | | |
| **Determine ECB's role in implementation of new laws, policies, and strategies and provide technical assistance and capacity building for ECB in necessary areas**<br>**Y1.01.01.09.NAM** | David Jankofsky | 10/21/2017 – 3/31/2018 | ECB request | OC4 renewable energy<br>OC1.04 | Assessment report on effect of new laws, policies and strategies on ECB (Requested by ECB)<br>Development and delivery of capacity building for ECB staff | Completed. The Board adopted the recommendations made on ECB's role in the IRP |
| **Development of tariffs methodology for electricity produced micro-/off-grid**<br>**Y1.01.01.11.NAM** | David Jankofsky<br>Tariff Specialist | 3 months following receipt of raw data from ECB | ECB request | OC4.06<br>Grant program | Recommended methodology and (possibly) tariff structure for off-grid sources of electricity (using mini-grid tariff excel tool from RERA if applicable) | Data received from CENORED and work on tariff continues, expected end date is 3/31/2018 |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Assessment of need for regulations governing storage taking into consideration additional RE supply**<br><br>**Y1.01.01.13.NAM** | Storage Specialist | 3 months following desk study of policy approaches (Y1.04.03.05.REG) | ECB request | OC4.03 | Assessment report and draft regulations. Second deliverable will be to share this regulation through RERA to other countries where applicable | Pending ECB completion of its desk study, this will roll into Year 2 |
| **MALAWI** | | | | | | |
| **Support to MERA coming out of MCC Implementation Plan for MERA Strengthening**<br><br>**Y1.01.01.15.MWI** | David Jankofsky | 10/15/2017 – ongoing | MCC | OC5 | Specific follow-on capacity building that is still required after MCC Strengthening Report completed, focusing on:<br>▪ Off-grid systems (SHSs and mini-grids)<br>▪ Energy Efficiency and Demand Side Management<br>▪ How best to evaluate IPPs and PPAs | Further support ongoing. The three priority areas of support are included in Year 2 Work Plan with MERA |
| **Support MERA review tariff application** [16]<br><br>**Y1.01.01.16.MWI** | David Jankofsky<br><br>Tariff Specialist | For 6 months following tariff filing by ESCOM | MCC | OC2 | Tariff review support and materials to support review. This will result in a variety of deliverables as issues arise during the 6-month evaluation of the tariff application | Completed. Lessons Learned document to be transmitted to MERA in the beginning of Year 2 |
| **Evaluation of IPP enabling environment (from regulatory perspective)** | Govind Saha (SIAL) | 3/15/2018 – 6/30/2018 | AfDB conversation; leading practices | Capital Mapping<br><br>OC1.04 | Report and recommendations on desirability of Malawi as IPP investment location | Initial draft report completed and being used for internal decision making on priority areas. Version for USG/Power |

[16] This support will follow on the support that MCC provided to MERA. MERA is receiving training and support in preparing Guidelines for Tariff Reviews under the new tariff mythology through the Crisil work (August – October 2017).

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.01.01.17.MWI** | | | | OC4.01 | | Africa consumption still being edited |
| **Support MERA in its role in the implementation of Single Buyer Model**<br>**Y1.01.01.19.MWI** | David Jankofsky | Ongoing | MERA Request | OC1.04 | Like the tariff application, this will entail numerous deliverables, some of which are mentioned in this Work Plan; others will arise during the implementation period. | Ongoing. Need to ascertain what other support MERA thinks it might require |
| **Support MERA in implementing a Quality of Service Program for regulated licensees**<br>**Y1.01.01.20.MWI** | David Jankofsky | 1/1/2018 – 9/30/2018 | MERA Request<br>MCC follow-on work | OC2 | Quality of Service program for regulated utilities, perhaps linked to rates<br>Work will be closely linked with OC2 KPI work to ensure consistency | Delayed and rolled into Year 2. Drafting of a QOS Program has kicked-off after the MERA tariff review activities |
| **Evaluate a mini grid regulatory framework**<br>**Y1.01.01.21.MWI** | David Jankofsky | 4/1/2018 – 6/30/2018 | MERA Request | OC4 | Report and recommendations<br>*Work from Zambia can be leveraged and depending on MERA's current status this activity may be premature, but was requested* | MERA noted receipt of comments. Possible follow up in next quarter to help with further incorporation and adoption into updated regulatory framework |
| **BOTSWANA** | | | | | | |
| **Support the operationalization of the new Botswana Energy Regulatory Authority**<br>**Y1.01.01.22.BWA** | David Jankofsky | 11/15/2017 – 9/30/2018 | BERA Request | OC2 | Development of Road Map for BERA<br>Provide training to BERA Staff on selected subjects<br>Support TORs for Cost of Supply Study for BPC<br>Recommend permanent funding source for BERA | Completed. Deliverables delivered and accepted by BERA. There are a few items that have rolled into Year 2 and SAEP will provide ongoing support |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| | | | | | Recommend tariff methodology for BERA<br><br>Support BERA in PPA review | |
| **ESWATINI** | | | | | | |
| **Support the public disclosure of tariff filings, expansion of KPIs to measure performance**<br><br>**Y1.01.01.23.SWZ** | David Jankofsky | 4 months after regional KPI work is completed | SAEP concept | OC4 | KPIs will be discussed in RWG meetings, enforced by regulator, but worked on and tracked by utility based on regional standards created as part of Intervention 2.10<br><br>Related to public disclosure and tariff filings | On schedule. This work will continue into Year 2 as part of the team's work on supporting eSwatini regulator with the tariff review of EEC |
| **MOZAMBIQUE** | | | | | | |
| **ARENE gas regulation support**<br><br>**Y1.01.01.24.MOZ** | David Jankofsky | To be defined further, but 3 months from start | ARENE and SPEED+ request | | To be scoped | Request was received at the end of the quarter and the activity scoping will be completed in Year 2 |
| **Intervention 1.03** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Analysis of possible options to attract PSP in the transmission sector. In Year 1, the focus will be on cross-border transmission** | T&D Expert | See OC3 | Leading practice | OC3 | Report with analysis of other countries' activities to identify lessons learned, establish, indicative costs and recommended option(s) | This activity has been slow to start given the work was to be concentrated with SAPP PAU, which has not sought SAEP technical assistance on the |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **projects and this work is detailed in OC3**<br><br>**Y1.01.03.01.ZMB** | | | | | | infrastructure fund to date. Work will commence when SAPP begins work on the fund with its appointed advisors |
| **NAMIBIA** | | | | | | |
| **Support regulatory adoption of transmission and distribution report on vRE being done by NamPower consultants and by ECB**<br><br>**Y1.01.03.02.NAM** | Jorry Mwenechanya | 1 month following finalization of studies and ECB commences review | ECB request | OC4.03 | Summary of comments and recommendations (emphasis on rural electrification plans) | ECB decided review not needed, so will help with implementation. ECB study will be the final. The team will review for internal purposes. Study by ECB is ready to go to Board |
| **MALAWI** | | | | | | |
| **Ensure that existing generators are complaint with the new Grid Code**<br><br>**Y1.01.03.05.MWI** | STTA Engineer | 7/1/2018 – 9/30/2018 | MERA request | OC1.01 | Report on compliance and recommendations | Delayed due to tariff filing. Still determining if MERA will prioritize this activity |
| **Review Interconnection Agreements for IPPs**<br><br>**Y1.01.03.06.MWI** | STTA Engineer | Following MERA tariff review | MERA request | OC1.01 | Report and recommendations. Possible development of standard agreement | Will work with MERA on this after the tariff review which has pushed activity to Year 2 |
| **Development of "light handed regulation interconnection agreement" for rooftop solar**<br><br>**Y1.01.03.08.MWI** | STTA Engineer | 7/1/2018 – 9/30/2018 | MERA request | OC1.01 | Interconnection Agreement template | Given all other activities and MERA priorities, this will not happen until Year 2, however discussions with MERA Director of Electricity and Renewable energy are undergoing to discuss having limited regulation |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Intervention 1.04** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Review of ZESCO procurement methodology, process and evaluation tools**<br>• **Meet with ZESCO procurement to determine needs related to unsolicited proposals**<br>**Y1.01.04.01.ZMB** | ZESCO embedded advisor Garth Broome | 4 months after LOC signing | Leading practice based on unsolicited proposal issue discussed | OC4.01 | Meeting notes from ZESCO Procurement / ZESCO strategy meetings to discuss procurement methodologies. Will be necessary to get a champion for this piece of work in the ZESCO procurement group<br>Procurement manual | Not yet initiated, but formalization of the application process for connection of IPPs has been discussed in workshops, and will form part of any approach to unsolicited proposals |
| **Development of mechanism to manage unsolicited IPP proposals (for Ministry, ZESCO & ERB)**<br>**Y1.01.04.02.ZMB** | OC1 Deputy | TBD | Leading practice based on unsolicited proposal issue discussed | OC1.02<br>OC4.01 | Recommendations and approach to managing and evaluating unsolicited proposals<br>Recommended mechanism to integrate unsolicited proposals with IRP (JICA developed) | Delayed. Will begin conversations with ZESCO and the ERB in Year 2. This is not included in the ZESCO priorities for Year 2, but may be requested by ERB |
| **Assist in the evaluation of a "one stop shop" to assist potential IPP developers in bringing their projects to fruition**<br>**Y1.01.04.03.ZMB** | OC1 Deputy | TBD | Ministry of Energy | OC4.01 | Discussion with Ministry of Energy for buy-in to determine where the one-stop shop will be housed and its duties (within OPPPI or external)<br>Action Plan to establish "one stop shop"<br>Action Plan for a supporting website<br>Formal training plan for staff | Delayed. Working to try to determine if the MOE will champion this activity. Limited traction currently. Other cooperating partners are interested in working with us on this activity |
| **Work with ZESCO and developers to implement Power Africa PPAs (turning them into bankable PPAs), implementation agreements and licenses** | ZESCO embedded advisor Garth Broome | 3/15/2018 – 9/30/2018 | Leading practice | OC4.01 | Training in template completion and usage | SAEP advisor reviewed the ZESCO PPAs and conducted an analysis comparing the components of the documents. Work on these documents will |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Analysis of documents that are needed to bring closure to transactions, including PPAs, implementation agreements, licenses, and others**<br><br>**Y1.01.04.04.ZMB** | | | | | | continue into Year 2 pulling in our lead transaction advisor |
| **NAMIBIA** | | | | | | |
| **Determine how SAEP can support the NEI in implementing the National Energy and Renewable Energy Policies**<br><br>**Y1.01.04.06.NAM** | Govind Saha (SIAL) | 8/1/2017 – 9/30/2018 | Leading practices | OC4 | Action plan (and implementation) | In progress. The team has scoped the support required and will now work with the Ministry of Energy and NEI on developing an implementation plan for the policies. The LOCs with this information have been shared with the Ministry and NEI and the team is waiting for acceptance by the counterparts before beginning work |
| **MALAWI** | | | | | | |
| **Transaction Support - Develop a policy for Government support for IPPs**<br><br>**Y1.01.04.09.MWI** | Govind Saha (SIAL) | As required in Year 1 | MCC recommended | OC1.01 | Provide transactional support for government support that helps Ministry of Finance working with ESCOM and DFIs/IMF provide a sustainable level of guarantees required to finance IPPs. Support for fiscal risk management, including both direct and contingent liabilities | This activity has been re-scoped and will be implemented moving forward following a transaction specific approach. The team will integrate Richard Morrison's work as well as MCC work into this. The support will occur when required and be provided to the counterparts |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| | | | | | | that require it when the IPPs are being negotiated |
| **Support MERA in evaluating EGENCO-ESCOM PPA**<br>**Y1.01.04.10.MWI** | David Jankofsky | 6 months when MERA receives PPA for review<br>This may be done before the ESCOM application is made | Leading practices | OC1.01 | Assistance in analysis (probably public interest analysis) | Completed. EGENCO-ESCOM Interim PPA reviewed (and approved by MERA) |
| **ESWATINI** | | | | | | |
| **Work with EEC on solar tender (Lavumisa Solar)**<br>**Y1.01.04.10.SWZ** | Jorry Mwenechanya | 1/1/2018 –7/15/2018 | EEC request | OC4.01 | In coordination with EEC work to determine the best approach to put out a solar tender | Completed review of EPC tender for Lavumisa. Now EEC would like support on finding financing. EEC has not released the RFP as they are still working on securing financing |
| **Review and provide recommendations on eSwatini Short Term Generation Plan**<br>**Y1.01.04.14.SWZ** | Shako (for technical)<br>Jorry Mwenechanya | 4/15/2018-6/1/2018 | EEC request | | Comments on Short Term Generation Plan | Completed. Awaiting EEC feedback |
| **Operationalize ESERA Procurement Unit**<br>**Y1.01.04.15.SWZ** | OC1 Deputy | 3/1/2018-9/30/2018 | ESERA request | | Procurement structure recommendations<br>Capacity building training on Procurement 101 | Initial discussions started and advice provided on initial structuring within ESERA. Work on holding pending decision on whether the Ministry of Natural Resources and Energy wants ESERA to manage this process. SAEP will support the procurement as required and requested by the Ministry |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **LESOTHO** | | | | | | |
| **Review opportunities for establishing a Solar Home Program (SHP) concessions program and supporting "one stop shop" for assist potential SHP IPP developers in bringing their projects to fruition**<br><br>**Y1.01.04.11.LSO** | Procurement Expert | 7/15/2018 – 9/30/2018 | Leading practice | OC4.01 | Review paper on establishment of SHP concessions program and supporting "one stop shop" | Currently awaiting feedback from LEWA CEO to understand if this is still a priority. This activity will probably be removed |
| **Gender analysis of procurement practices using one-stop shop evaluation in Lesotho**<br><br>**Y1.01.04.12.LSO** | Gender Specialist | 7/15/2018 – 9/30/2018 | Leading practice | OC4.01<br><br>Gender | Recommendations to procurement organizations to increase diverse participation in procurement | Currently awaiting feedback from LEWA CEO to understand if this is still a priority |
| **BOTSWANA** | | | | | | |
| **Review of Solar EOIs and support to BPC on review of EOIs and training on tender process and RFP design (includes 100 MW solar tender and scoping off-grid tender opportunities)**<br><br>**Y1.01.04.13.BWA** | Christine Covington, Procurement Expert | 8/10/2017 – 9/30/2018 | BPC request | OC4.01 | Training on procurement processes and international leading practices for EOI review and RFP development | EOIs have been reviewed, and RFI was received and short listed bidders informed. A number of the components of the RFP are completed, but some details around government support and structuring are pending. Thus some work on the 100MW solar will continue into Year 2 |
| **Intervention 1.05** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Develop a quick SAEP gas masterplan and deal assessment leveraging existing material and in conjunction with other initiatives**<br><br>**Y1.01.05.01.REG** | Fransje van der Marel/Otto Waterlander (McKinsey) | 10/16/2017 – 4/30/2018 | Need for integrated and coordinated approach, stakeholders like for Power Africa to help coordinate | | Southern Africa Gas Roadmap to guide SAEP gas work<br><br>Presentation(s) on Regional Gas Roadmap | Completed |
| **Develop a plan to support and how to support RSA IPP Office, NERSA and other counterparts on transactions**<br><br>**Y1.01.05.02.REG** | OC3 Lead | 1/5/2018 – 9/30/2018 | Complex stakeholder and political landscape. Need to support only deals that succeed in SAEP time frame | OC4.01, USTDA IPP Office TO | Overview of deals/transactions to support and support assistance as needed | Plan has been developed. LOC still requires finalization |
| **Potential (pursued only after "go" decision): Answer outstanding questions on LNG-to-Power program to assist IPP Office to accelerate the launch of the LNG to Power RFQ in South Africa (up to 3000 MW)**<br><br>**Y1.01.05.03.REG** | Fransje van der Marel/Otto Waterlander (McKinsey) | On hold | In depth risk and trading capability is needed, not locally available. International expertise required. Builds on existing relationships with IPP Office. IPP Office support | OC4.01, USTDA IPP Office TO | *To be decided in later stage*<br><br>Report and input to RFQ/RFQ process (No clarity on estimated date of release although the Government of South Africa has stated its intent to go ahead with the gas to power program)<br><br>Continue to implement support as needed – reports, presentations or other assistance as required | Currently on hold |
| **Potential (pursued only after "go" decision): Support NERSA in South Africa to structure the market, define the role of the private sector, and enhance pricing mechanisms to cater for LNG (and LPG) import (up to 3000 MW)**<br><br>**Y1.01.05.04.REG** | Fransje van der Marel/Otto Waterlander (McKinsey) | On hold | In depth expertise needed | | Recommendations on modifications necessary to legal and regulatory framework to ensure that gas is not disadvantaged as a power generation source | Currently on hold pending decisions by the IPP Office and/or NERSA |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Potential (pursued only after "go" decision): Support EDM and its partners to close various gas to power projects that are currently on the drawing board (between 200-500 MW)**<br>**Y1.01.05.05.REG** | Fransje van der Marel/Otto Waterlander (McKinsey) | On hold | Core to Power Africa mandate, yet to be aligned with other initiatives | | Prioritized list of projects to be brought to financial closure by the Program's end | This activity will be considered as part of transaction advisory services under 4.01 as transactions arise |
| **Attend the Gas conference**<br>**Present Regional Gas Roadmap at appropriate event**<br>**Y1.01.05.10.REG** | Fransje van der Marel (McKinsey) | 12/1/2017 – 12/15/2017 | Buy-in and approval will be required | | No deliverable required<br>Regional Gas Roadmap presentation | Completed |
| **Review SADC Regional Gas Roadmap TOR**<br>**Y1.01.05.11.REG** | Pieter Prickaerts (McKinsey) | 3 months following SADC Regional Gas Subcommittee launch meeting | SADC request | | SADC Regional Gas Roadmap TOR comments and recommendations | Completed. The team drafted the TOR for the SADC Secretariat and is awaiting feedback on if it has been accepted by the Ministers to be released |
| **Intervention 2.01** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Complete detailed sector assessment**<br>**Y1.02.01.01.ZMB** | Kannan Lakmeeharan (McKinsey)<br>Zambia Country Manager | 7/5/2017 – 12/26/2017 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Report on current state of power sector (this will be quick assessment building on work previously done) | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Develop sector recommendations for long term sector improvement at 3 levels: utility, transaction and sector**<br>**Y1.02.01.02.ZMB** | Kannan Lakmeeharan (McKinsey)<br>Zambia Country Manager | 10/1/2017 – 1/15/2018 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Recommendations on interventions to deal with challenges | Completed |
| **Engage development partners and funders on assessment**<br>**Y1.02.01.03.ZMB** | Kannan Lakmeeharan (McKinsey)<br>Zambia Country Manager | 11/16/2017 – 12/20/2017 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Meeting notes and presentations from attending donor coordination meeting or through other avenues where SAEP works with development partners on SCWG design | Completed |
| **Confirm mode of support to the Transformation Taskforce and ZESCO**<br>**Y1.02.01.04.ZMB** | Zambia Country Manager | 7/15/2017 – When taskforce report is released | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | LOC/TOR for support | Moved to year 2. Amended activity timeline based on status of work of the Transformation Taskforce |
| **Provide support to the taskforce to develop an action plan to improve the commercial viability of ZESCO**<br>**Y1.02.01.05.ZMB** | Kannan Lakmeeharan (McKinsey)<br>Zambia Country Manager | 10/15/2017 –End date to be confirmed once Cabinet or responsible Ministers confirm support needed (likely to move to Year 2) | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Minutes from Taskforce and report on action plan | Moved to year 2. Amended activity timeline based on the status of work of the Transformation Taskforce |
| **Promote women leadership in the working groups with specialized training on management development**<br>**Y1.02.01.06.ZMB** | Gender Specialist<br>Zambia Country Manager | Ongoing starting with LOC signing with ZESCO and ZESCO Task Force kick-off | SAEP concept | Cross-cutting | Training material | Will continue into Year 2 |
| **Revenue protection program or technical loss reduction work**<br>**Y1.02.01.07.ZMB** | Technical Loss Reduction Expert (from Deloitte SA or WP) | 6 months following buy-in from ZESCO to start the work | SAEP concept based on discussions with ZESCO | Viable off-taker, builder of infrastructure<br>OC4 | Deliverable will be defined through discussions with ZESCO | After LOC was signed, SAEP discussed this activity with ZESCO. IFC would like to take over this activity and thus SAEP will remove |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| | Zambia Country Manager | | | | | |
| **MALAWI** | | | | | | |
| **Complete detailed sector assessment**<br>**Y1.02.01.08.MWI** | Kannan Lakmeeharan (McKinsey)<br>Malawi Country Manager | 12/1/2017 – 4/15/2018 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Initial view on path to impact for MW and connections in Malawi in PowerPoint<br>Report on current state of power sector (in coordination with MCC) | Completed |
| **Develop sector recommendations at 3 levels; utility, transaction and sector**<br>**Y1.02.01.09.MWI** | Kannan Lakmeeharan (McKinsey)<br>Malawi Country Manager | 3/15/2018 – 4/30/2018 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Recommendations on interventions to deal with challenges (in coordination with MCC) | Completed |
| **Engage development partners and funders on assessment**<br>**Y1.02.01.10.MWI** | Kannan Lakmeeharan (McKinsey)<br>Malawi Country Manager | 3/15/2018 – 4/15/2018 | SAEP concept based on East Africa success | Viable off-taker, builder of infrastructure<br>OC4 | Meeting notes and presentations for discussions (where needed) | Completed |
| **Intervention 2.02** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Based on sector assessment, interactions with ZESCO and the transformation taskforce, develop capital requirements and funding instruments currently available**<br>**Y1.02.02.01.ZMB** | Kannan Lakmeeharan (McKinsey)<br>Financial Advisor | Starts when Transformation Taskforce commences | SAEP concept based on East Africa success | Funding of new infrastructure<br>OC4 | Diagnostic and tracking tool for utility reform funding options (CrossBoundary capital mapping will feed into this diagnostic) | Removed because activities tied to the transformation taskforce have not started in Year 1 |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Work with ZESCO and developers to implement Power Africa PPAs (turning them into bankable PPAs), implementation agreements and licenses**<br><br>**Analysis of documents that are needed to bring closure to transactions, including PPAs, implementation agreements, licenses, and others**<br><br>**Y1.02.02.09.ZMB** | ZESCO embedded advisor Garth Broome | 3/15/2018 – 6/30/2019 | Leading practice | OC4.01 | Training in template completion and usage | Ongoing. This is listed in both OC1 and OC2. Timeline extended to Year 2 to provide targeted assistance on specific PPAs |
| **Develop a capital planning manual. Analyze present evaluation tools and make recommendations to build the necessary tools for generation, transmission and distribution pricing and modelling.**<br><br>**Y1.02.02.10.ZMB** | ZESCO embedded advisor Garth Broome | 3/15/2018 – Year 2 | Leading practice | | Capital planning manual (for ZESCO) | Pricing work is delayed to Y2 due to delay in release of the Cost of Service Study |
| **Refine the existing Project Management policy including review of Project Initiation Procedures, Project Planning Procedures, Project execution Procedures and project close out**<br><br>**Y1.02.02.13.ZMB** | ZESCO embedded advisor Garth Broome | 6/1/2018 – 9/30/2018 | ZESCO Request<br><br>(Corporate Projects) | OC1.04 | Enhanced Project Management Policy | Completed |
| **MALAWI** | | | | | | |
| **Based on sector assessment, develop capital requirements and funding instruments currently available for EGENCO and to** | Kannan Lakmeeharan (McKinsey)<br><br>Financial Advisor | 2 months following sector assessment | SAEP concept based on East Africa success | Funding of new infrastructure<br><br>OC4 | Diagnostic and tracking tool for utility reform funding options (CrossBoundary capital mapping will feed into this diagnostic) | Capital requirements completed – funding and SBU activities postponed until Year 2. Further clarification with |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **create a viable Single Buyer (outside or within ESCOM)**<br><br>**Y1.02.02.03.MWI** | | | | | | MCC and other stakeholders is needed |
| **LESOTHO** | | | | | | |
| **Assist in development of LEC Strategic Plan, provide comments and facilitate senior management working session**<br><br>**Y1.02.02.07.LSO** | Wayne Mikutowicz<br><br>Izak Du Plessis | 3/15/2018 – 9/30/2018 | LEC requested | | Revised Strategic Plan and guidance on how to operationalize within the organization | Ongoing. Development of the plan is underway and almost complete. The team is working with the LEC Board to schedule additional meetings to finalize updates |
| **Work with LEC to ring-fence Gx, Tx, Dx and Sx so as to comply with LEWA requirements**<br><br>**Y1.02.02.08.LSO** | Wayne Mikutowicz | On hold | LEC requested | Plans for LEC to adopt SAP and change financial software package | Revised SOW for ring-fencing and ring-fencing capstone report | This activity is on hold. LEC is now deciding whether to pursue this activity in Year 2 |
| **Intervention 2.03** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Assist ZESCO and GRZ Ministry in developing Guide for Board Members**<br><br>**Y1.02.03.02.ZMB** | Wayne Mikutowicz<br><br>Govind Saha | 7/1/2018 – 8/1/2018 | USAID Zambia | OC4 | Guide for Selection and On-Boarding of Board Members | Initial scope has commenced on developing guidelines and TNA templates. The ZESCO meetings were delayed, impacted by transformation committee activities |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Support the public disclosure of tariff filings, expansion of KPIs to measure performance (working with regulator to enforce)**<br><br>**Y1.02.03.03.ZMB** | Izak Du Plessis | 4 months starting when Transformation Taskforce commences | SAEP concept | OC4 | KPIs will be discussed in RWG meetings, enforced by regulator, but worked on and tracked by utility based on regional standards created as part of Intervention 2.10<br><br>Related to public disclosure and tariff filings (is that OC1 – this is for the utility, not the regulator) | Delayed, impacted by transformation committee activities-requires buy-in from ZESCO and execution of the LOC |
| **Develop capacity building programs for utility board members, executives, and ZESCO management**<br><br>**Y1.02.03.04.ZMB** | Wayne Mikutowicz | 4/30/2018 – 12/30/2018 | SAEP concept | OC4 | Workshop | Delayed, impacted by transformation committee activities-requires buy-in from ZESCO and execution of the LOC<br><br>Conducted capacity building training with ERB on governance |
| **Work with ZESCO to establish benchmarks for transparent governance practices**<br><br>**Y1.02.03.06.ZMB** | Wayne Mikutowicz | 3 months starting when Transformation Taskforce commences | SAEP concept | OC4 | Benchmarks for governance practices | Delayed, impacted by transformation committee activities-requires buy-in from ZESCO and execution of the LOC |
| **Support ZESCO's board on improving decision-making transparency**<br><br>**Y1.02.03.07.ZMB** | Wayne Mikutowicz<br><br>Govind Saha | 3 months starting when Transformation Taskforce commences | SAEP concept | OC4 | Training tools and board notes<br><br>*Work with Min of Energy on Board establishment and training may occur in Year 2* | Delayed, impacted by transformation committee activities-requires buy-in from ZESCO and execution of the LOC |
| **Assistance ZESCO to identify funding options to reduce customer backlog**<br><br>**Y1.02.03.11.ZMB** | TBD | 3 months after LOC signed | ZESCO Request | OC1 | Report/presentation identifying funding options | Delayed. This will only commence if/when ZESCO is in a place to take this piece of work further |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **MALAWI** | | | | | | |
| **Begin to address some of the MCC identified governance practices identified in the benchmarking study for ESCOM and EGENCO Boards**<br>**Y1.02.03.13.MWI** | Wayne Mikutowicz<br>Govind Saha | On hold | MCC recommendation | OC4 | Targeted benchmarks for governance practices | This activity has been postponed until there is more clarity form ESCOM |
| **ESCOM management and operational improvement scoping and support**<br>**Y1.02.03.14.MWI** | Wayne Mikutowicz | On hold | MCC recommendation | OC1 | Target management specific areas – define areas for improvement – develop program and expected results<br>Potentially IT Support (Year 2) | This activity has been postponed until there is more clarity form ESCOM |
| **Support to EGENCO to operationalize its Strategic Plan**<br>**Y1.02.03.19.MWI** | M&E Strategic Plan Specialist (Micali) | 5/15/2018 – 6/30/2019 | EGENCO request | OC1 | Develop process and procedures for M&E to implement strategic plan | First 2 phases of this activity are completed. The balance score card has been presented to the board and approved. The work will continue into Year 2 |
| **Intervention 2.04** | | | | | | |
| **NAMIBIA** | | | | | | |
| **Conduct or review cost of service studies (COSS) for distribution, transmission & generation**<br>**Y1.02.04.03.NAM** | David Jankofsky / Electricity Tariff Expert | 3/1/2018 – 9/15/2018 | Request by ECB | OC1 | COSS or COSS Review Reports on distribution, transmission & generation | Amended activity and timeline based on discussions with the ECB. Activity has not yet started because ECB has not requested review by SAEP yet |
| **Intervention 2.05** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **MALAWI** | | | | | | |
| **Determine if loss reduction work building on MCC Financial & Operational Turnaround Program with ESCOM should be conducted**<br><br>**Y1.02.05.06.MWI** | Mario Fernandes (Deloitte SA) | Dates TBD | MCC support | OC4 | Initial assessment of opportunity for loss program | Timing dependent on coordination with MCC work and ESCOM buy-in. Currently it is not estimated that SAEP will undertake loss reduction work as it is not an ESCOM priority |
| **MOZAMBIQUE** | | | | | | |
| **EDM Community Engagement Strategy and Pilot Implementation**<br><br>**Y1.02.05.08.MOZ** | Jose Cavaretti | 4/1/2018 – 9/30/2018 | SRUC continuation | | Community Engagement Strategy word document and summary PowerPoint presentation<br><br>Workshop Training Material<br><br>Template Community Engagement Materials<br><br>Community Engagement Implementation Roadmap | The draft final Community Engagement Strategy was shared with EDM and is being finalized for board approval. An English version will be shared with USAID as soon as it is available |
| **REGIONAL** | | | | | | |
| **Support utilities in grid expansion plans**<br><br>**Y1.02.05.08.REG** | T&D Specialist | Year 2 | SAEP concept | OC4 | Initial assessment of grid expansions plans. Initial targeting will be with EDM and will be expanded to other utilities | This activity will be moved to Year 2 |
| **Intervention 2.07** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **REGIONAL** | | | | | | |
| **Work with utilities in RERA, SAPP and SADC/Energy to identify potential regional KPIs**<br>**Y1.02.07.01.REG** | Izak Du Plessis (Deloitte SA) | 8/7/2017 – 3/31/2018 | Request from RERA and recognized by SAPP as needed | OC3.04 | Inception Report including identification of key KPIs and development of verification and reporting process | Completed and will be presented at RERA conference in November |
| **Recommend KPIs at the regional level**<br>**Y1.02.07.02.REG** | Izak Du Plessis (Deloitte SA) | 4/1/2018 – 9/30/2018 | Request from RERA and recognized by SAPP as needed | OC3.04 | Regional KPIs Final Report | Completed and will be presented at RERA conference in November |
| **MALAWI** | | | | | | |
| **Recommend to ESCOM actions to improve KPIs (building on MCC work)**[17]<br>**Y1.02.07.07.MWI** | Wayne Mikutowicz | TBD | MCC support | OC4 | Action plan for performance improvement | This activity is dependent on the MCC completion and engagement with ESCOM. No specific activities have been identified to undertake in Year 2 |
| **Intervention 3.01** | | | | | | |
| **Review SADC's Protocol on Energy**<br>**Y1.03.01.03.REG** | Neil Borland<br>Tshwanelo Rakaibe | 2/1/2018 – 9/30/2018 | The current Protocol is dated (1996) / SADC requested assistance to review | | Updated Protocol | On schedule. The review has been completed and SAEP is waiting for there to be a SADC workshop on the topic to finalize updates |
| **Intervention 3.02** | | | | | | |

[17] MCC developed performance milestones for ESCOM and ESCOM agreed to develop a dashboard for strategic KPIs for monitoring performance as well as developing Job Output Agreements for all staff. Pending approval from the CEO/COO, SAEP will continue this work and support ESCOM with establishing a system for KPI tracking building on the MCC work.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Provide capacity building and training for market participants and stakeholders with specific focus on balancing – and ancillary markets**<br><br>**Y1.03.02.03.REG** | Michael Barry | 4/15/2018 – 8/30/2018 | Discussion is ongoing for quite a while with no commitment to proceed / Requested by the SAPP CC but details will have to be discuss it with their current service provider to minimize duplication | OC5 | Training report including training plan for sharing lessons learned throughout SAEP region | Completed |
| **SAPP Strategic Planning Session Facilitation**<br><br>**Y1.03.02.04.REG** | Wayne Mikutowicz | 3/15/2018 – 4/30/2018 | SAPP request | OC2 | Meeting Agenda<br><br>Report on event and Strategic Plan guidance | Completed. Held a one-day workshop with SAPP utility leadership on transforming SAPP as a regional power market |
| **Intervention 3.04** | | | | | | |
| **Assist the SAPP and RERA to develop a guideline for access of new generators to the SAPP interconnected system**<br><br>**Y1.03.04.02.REG** | Regional operating framework specialist | 8/31/2018 – 1/30/2019 | The current guideline is outdated / SAPP CC requested – further discussions are required with SAPP and RERA | OC5 | Approved SOW in Y1 which will lead to access guideline and training report<br><br>*Advancement of new generation capacity, especially from the private sector* | Delayed and will progress into Year 2 |
| **Provide Capacity Building workshop to SAPP for renewable energy technologies and operational challenges** [18] | David Jarrett | 6/1/2018 – 9/30/2018 | To understand the intermittent nature of renewables | OC4 | Training Materials<br><br>Training report | Completed. Training was delivered. The LOC and addendum were finalized and signed. |

[18] Will build on South African and international experience as well as inputs received from the SAPP CC.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Y1.03.04.03.REG** | | | /SAPP CC request | | | |
| **Provide Capacity Building for Quality of Supply**<br><br>**Y1.03.04.04.REG** | Chris Mubemba | 9/1/2018 – 9/30/2018 | QOS had been discussed for quite a while and utilities are hesitant to take calculate risks on the interconnectors / This was requested by the SAPP CC | OC5 / OC1 | Training report | The LOC and addendum were finalized and signed. Zambia Country Manager is developing the training content outline which SAPP CC has approved. The training will happen in November and SAPP has asked that an international expert join the training with Chris M. |
| **Intervention 3.05** | | | | | | |
| **Assessment of progress and probability of reaching Financial Close of the planned transmission interconnectors in Zambia, Namibia and Malawi**<br><br>**Y1.03.05.03.REG** | CrossBoundary | 10/1/2017 – 12/15/2018 | A general concern exists that most of the new transmission interconnectors will not reach FC / Had initial discussion with the SAPP CC but a follow up discussion and commitment with its PAU is required | | Three assessment reports<br><br>*Support creation of new transmission capacity* | This activity will continue into Year 2. Initial evaluation of interconnector progress as part of Y1.03.05.06.REG and Y1.03.05.08.REG. Full financial closure evaluations of interconnectors will be finalized in Year 2 as the team begins to support ZTK and Malawi-Moz interconnectors |
| **Embedded Project Advisor in EDM to manage the Temane Transmission Project and its interface to the Temane 400 MW IPP project**<br><br>**Y1.03.05.04.REG** | Bruno Batista | 1/1/2018 – Year 2 | This activity had been requested by EDM and the SAEP involvement is supported by SPEED+ | | 400 MW of Generation and opportunities of providing access to new consumers en route to Maputo.<br><br>Progress will be reported through quarterly reports | On schedule and many activities completed this year. Embedded Project Coordinator has been appointed in EDM |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Advisor to assist ESCOM to prepare to operate in an interconnected system and at 400kV**<br><br>**The following tasks will be done in Y1**<br>- **Preparation of ESCOM personnel for operating and maintaining a 400kV transmission system**<br><br>**The following task will be done in subsequent years**<br>- **Preparation of ESCOM personnel for operating in an interconnected system**<br>**Y1.03.05.05.REG** | TBD | 6/15/2018 – Year 3 | This need had been identified by OC3 Lead, requested by ESCOM and supported by MCC to ensure sustainability of their 400kV project | | Advisor reports-1000 MW of new interconnector capacity | Delayed start date due to stalled discussions with ESCOM Malawi. SOW was only finalized during June 2018. The training outline has been completed and is with ESCOM for review<br><br>ESCOM indicated they no longer require assistance with the Mozambique interconnector |
| **Develop project summary document for each of the regional interconnector projects**<br><br>**Y1.03.05.06.REG** | Tshwanelo Rakaibe | 4/1/2018 – 9/30/2018 | Leading practice | | Project summary document for each regional interconnector | On schedule. Team has started to develop the one pagers for interconnectors and TTP. Will be finalized for project use in Year 2 |
| **Develop a tracker for regional transmission interconnectors and complete quarterly update to the tracker**<br><br>**Y1.03.05.08.REG** | Willem Theron | 1/7/2018 – 9/30/2022 | Leading practice | OC4.01 | Complete Quarterly Update of transmission tracker | On schedule. Tracker has been developed in excel and data is being populated and feeding into the transaction pipeline. When the team begins to work on ZTK and Mal-Moz further details on the interconnectors will be updated quarterly on the tracker |
| **Support capacity-building for production optimization in Malawi**<br><br>**Y1.03.05.09.REG** | Michael Barry | 7/1/2018 – 8/30/2018 | Initial discussions with target entities indicates a willingness to cooperate | | System Optimization Tool | This activity was moved from Intervention 3.01 (Y1.03.01.08.REG)<br><br>Following the finalization of the SOW in June 2018, Mr. Michael Barry has engaged ESCOM to |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| | | | | | | develop the production optimization skill set and tool. This activity goes into Year 2 |
| **Intervention 3.06** | | | | | | |
| **Ensure alignment between SAEP and SAPP on the Transmission Infrastructure Fund (including WB coordination)**<br><br>**Y1.03.06.01.REG** | Willem Theron | 10/24/2017 – 11/10/2017 | SAPP will use a procurement process to procure a consultant that will advance and establish the fund/ SAPP. SAPP will use SAEP as an advisor to this process | OC3.05 | Signed letter of collaboration | Completed |
| **Ongoing assistance and advice as the SAPP advisor as they work with procured advisors to develop the transmission infrastructure fund**<br><br>**Y1.03.06.06.REG** | Willem Theron<br><br>Frederik Benzel (CrossBoundary) | 4/1/2018 – Year 2 | SAPP will use a procurement process to procure a consultant that will advance and establish the fund/ SAPP. SAPP will use SAEP as an advisor to this process | OC3.05, 4.01 | Quarterly Reports | This activity will continue into Year 2. SAPP's Mr. Musara Beta confirmed SAPP conducting technical evaluations and currently evaluating the RFP. They are awaiting a "no objection" from the World Bank before they proceed to financial evaluations |
| **Intervention 4.01** | | | | | | |
| **REGIONAL** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Develop capital map and investment barrier analysis on energy projects within the SAEP region**<br><br>**Y1.04.01.01.REG** | Frederik Benzel (CrossBoundary) | 7/15/2017 – 10/30/2017 | Leading practice | OC4.06, OC1.04 | Capital map- written Word document with supporting excel database | Completed |
| **Develop a pipeline of high-impact energy transactions that require active transaction support. Primary focus on Zambia, Malawi, Namibia, Madagascar and South Africa**<br><br>**Y1.04.01.02.REG** | Frederik Benzel (CrossBoundary) | 8/1/2017 – 11/31/2017 | Leading practice, PATT requirement | OC4.06 small off-grid transactions, OC2 on-grid transactions, OC3 transmission transactions, OC1.04 procurement design | Project pipeline for active transaction support (split between renewable and non-renewable energy transactions) | Completed. Will be updated on an ongoing basis and included in the PATT quarterly |
| **Delivering active transaction support to selected energy projects to assist in reaching transaction close**<br><br>**Y1.04.01.03.REG** | Frederik Benzel (CrossBoundary)<br><br>PATT Reporting, PMO team | 1/10/2018 – Year 5 | Leading practice | OC4.06 small off-grid transactions, OC2 on-grid transactions, OC3 transmission transactions | Transaction documents & lessons learned reports as required<br><br>Transactions actively supported<br><br>Updates to transaction tracker and the PATT | Completed and ongoing. Quarterly transaction reports shared with USAID, Transaction Tracker updated and PATT updated. Support to GET FiT developers in Zambia to be targeted for support |
| **Assist relevant transaction counterparties (to include financiers, developers, government, and others as necessary to ensure transactions reach financial close) in performing financial modeling for valuation and analysis, transaction structuring, due diligence, and fundraising support, as appropriate**<br><br>**Y1.04.01.04.REG** | Frederik Benzel (CrossBoundary)<br><br>Transaction Advisor | Ongoing | Leading practice | OC4.06 small off-grid transactions, OC2 on-grid transactions, OC3 transmission transactions | Financial models and/or reports, as required to provide relevant transaction support | Some completed and others ongoing. SSIRs completed and transaction advisory and TTS projects have been identified |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Support to develop bankable PPAs, connection agreements, financing to manage risks, and other areas**<br><br>**Y1.04.01.05.REG** | Legal Advisor<br><br>Sebastian Deschler (CrossBoundary) | Ongoing | Leading practice and building on PATRP | OC1.04 | Bankable PPAs, connection agreements and other deal documents developed and then stored in central location for future use (owned by RERA)<br><br>Personnel trained or mentored<br><br>*Review/enhance existing documents/templates in utilities and commissions (coordinate with other actors, e.g. PATRP)* | Completed and ongoing and pulled in as needed for transactions |
| **Legal services to support transactions**<br><br>**Y1.04.01.06.REG** | Cliff Dekker Hofmeyr<br><br>Sebastian Deschler (CrossBoundary) | Support will be provided as needed | Leading practice | OC4.06 small off-grid transactions, OC2 on-grid transactions, OC3 transmission transactions | Legal and other documents as required for transactions. (To be detailed later) | No legal services have been used for transactions during this period, but are preparing legal scope for next quarter (Mpatamanga project in Malawi) |
| **MALAWI** | | | | | | |
| **Transaction Advisory services to PPPC/EGENCO on Mpatamanga project**<br><br>**Y1.04.01.07.MWI** | Transaction Advisor<br><br>Sebastian Deschler (CrossBoundary) | 1.5 years starting April 2018 after LOC and SOW are finalized with PPPC/EGENCO | EGENCO request; IFC request ~~AfDB~~ | OC1.04 | Joint Development Agreement signed with IFC and project co-developer.<br><br>Mpatamanga phase one development complete and project is ready for tender design and launch. | Completed for Year 1 and support will continue into Year 2. Taskforce has been set up and inaugural meetings have occurred |
| **SOUTH AFRICA** | | | | | | |
| **Provide transaction advisory support to IPP Office for REIPPP Round 3.5 and 4.0 projects** | Craig VanDevelde | 9/1/2017 – 5/31/2018 | IPP Office request | OC1.04 | Assessment report covering 27 IPP projects addressing issues associated with technical and economic | Completed and 25 of the 27 projects have reached financial close |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Y1.04.01.10.RSA** | Technical Advisors (Mott McDonald)<br><br>Economic Development Advisors (Ledwaba Mazwai) | | | | development issues (deliverable confidential to counterpart) | |
| **ESWATINI** | | | | | | |
| **Provide financial advisory support to EEC for the Lavumisa project**<br><br>**Y1.04.01.11.SWA** | John Less<br><br>Jorry Mwenechanya | 9/15/2017 – 8/31/2018 | EEC request | | Financing source identified | LOC to be signed by EEC. Activity was extended because EEC still requires additional support with engaging funders |
| **Provide financial advisory support to EWSC solar project**<br><br>**Y1.04.01.12.SWA** | John Less<br><br>Jorry Mwenechanya | 7/1/2018 – 12/14/2018 | EWSC request | | Financing arranged or financial close reached | Timeline extended because the activity has not yet commenced due to uncertainty around whether EWSC is allowed to run an RFP for an IPP. EWSC now would like to look at options for EE as it cannot afford to pay for solar procurement |
| **Intervention 4.02** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Assess grid requirements for smart meter deployment in Zambia**<br><br>**Y1.04.02.01.ZMB** | Smart Grid Expert | 7/1/2018-9/30/2018 | ZESCO FibreCom and ETS SCADA, Distribution DSM, Systems Operations request | OC2 | Assessment report for ZESCO | Delayed due to ZESCO LOC signing. The team will determine from a cost-benefit perspective whether this activity will be undertaken given the volume of support and the current financial position of ZESCO |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **TA to utilities on analysis of and strategies for smart grid deployment. Include aspects of Grid Code Management and role of System Operator**<br><br>**Y1.04.02.02.ZMB** | Smart Grid Expert | 7/1/2018-9/30/2018 | ZESCO FibreCom and ETS SCADA, Distribution DSM, Systems Operations request | OC2, OC5 | Smart grid strategy report w/ ZESCO and training materials | Delayed due to ZESCO LOC signing. The team will determine from a cost-benefit perspective whether this activity will be undertaken given the volume of support and the current financial position of ZESCO |
| **Intervention 4.03** | | | | | | |
| **ESWATINI** | | | | | | |
| **Conduct vRE eSwatini Grid capacity study and associated training**<br><br>**Y1.04.03.01.SWZ** | Integration of Intermittent Resources Specialist | 1/15/2018 – 9/30/2018 | EEC request | OC1.04 | Grid capacity study and dynamic load flow support | Part 1 of the study has been completed and delivered to EEC<br><br>Part 2 will be initiated in July. A consultant will be on-boarded to support the effort |
| **ZAMBIA** | | | | | | |
| **Work with ERB and ZESCO to develop interconnection standards for power imports from vRE**[19]<br><br>**Y1.04.03.03.ZMB** | Integration of Intermittent Resources Specialist | 2 months after ZESCO LOC signed | Leading practice | OC2<br><br>PATRP | Interconnection standard report and template commercial contract document | Delayed. LOC signed with ZESCO this quarter. |
| **Review vRE study done by ZESCO**<br><br>**Y1.04.03.04.REG** | ZESCO Embedded Advisor Garth Broome | 4/15/2018-9/30/2018 | Leading practice | | Report providing guidance on how to determine inputs for static and dynamic impact studies to identify grid issues for new connections of small-scale solar PV energy | LOC signed. First level evaluation completed. |

[19] From discussions with PATRP ZESCO embedded advisor and subsequent meetings with ZESCO, there are areas for SAEP to complement the advisor's work. The team will work closely with the advisor to determine if any of this is covered in his scope and will build on work that he is currently doing related to this activity.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| | | | | | generation. Include ZESCO final studies as examples | Activity scoping in progress for more detailed review |
| **NAMIBIA** | | | | | | |
| **CENORED battery storage analysis[20]**<br>**Y1.04.03.05.REG** | David Jarrett<br>Storage Specialist | 7/10/2018 – 8/22/2018 | Leading practice | | Cost Benefit Analysis Model and Report Outlining Recommendations | The first piece of analysis has been completed and will be shared with CENORED the last week of October |
| **Intervention 4.05** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Document status of ongoing EE and DSM regulation initially in Zambia**<br>**Y1.04.05.04.ZMB** | McKinsey<br>Chris Mubemba | 1 month after Chamber of Mines meeting | Leading practice | OC2 | Status report | Completed |
| **Formulate DSM/EE interventions working with the regulator, ZESCO, Copperbelt Energy Corporation (CEC) and the Chamber of Mines in Zambia**<br>**Y1.04.05.05.ZMB** | John Less<br>Chris Mubemba | 2 months following decision by Chamber of Mines to engage on the topic | CEC and ZESCO discussions; further discussions and buy-in will be needed | OC2 | Potential energy savings documented<br>Regulatory framework developed | Engagement with the Chamber of Mines have stalled. SAEP team is still working to get a decision from them |
| **MALAWI** | | | | | | |
| **Assess potential of DSM and EE in Malawi's power sector** | EE/DSM Specialist, Izaiah Mulenga | 2 months from finalization of Malawi sector assessment | Continues work of the MCC | OC1 for net metering regulation | Report outlining estimated MW savings from DSM/EE opportunities | The activity has been initiated and an inception report developed. The DSM specialist |

[20] Namibia CENORED has already approached SAEP with interest in being the site for a storage pilot and has received a quote from Tesla on their storage packs.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Y1.04.05.06.MWI** | | | | | and recommendations for implementing such programs | has begun analyzing the data received |
| **NAMIBIA** | | | | | | |
| **Develop recommendations to improve the DSM program and develop model regulations for utility-based DSM, working with MME and NEI**<br><br>**Y1.04.05.10.NAM** | David Jarrett, Adam Newman | Month of May for scoping<br><br>7/1/2018 – 9/30/2018 | RERA input needed for regional scale | OC2 | DSM model regulations produced<br><br>LOC with MME | A separate LOC has been developed for the Namibia Energy Institute (NEI) to kick start the activity. This work will be completed in Year 2 |
| **Assist MME and ECB in operationalizing/ adjusting regulations to extract maximum benefit from the DSM program**<br><br>**Y1.04.05.11.NAM** | David Jarrett | 3 months after completion of regulations | Leading practice | | Adjusted regulations prepared | Dependent on completion of Y1.04.05.10.NAM |
| **ESWATINI** | | | | | | |
| **Concept note on net metering**<br><br>**Y1.04.05.12.SWZ** | David Jankofsky | 6/15/2018 – 9/1/2018 | ESERA request | OC4 | Concept note net metering and discussion documents | Initial draft has been submitted to ESERA for review. Additional items will be incorporated and finalized in beginning of Year 2 Will use the concept note being developed for BERA on this topic |
| **Energy Efficiency Policy**<br><br>**Y1.04.05.13.SWZ** | Energy Efficiency Expert | 8/15/2018 – 9/30/2018 | Ministry request | | Review energy policy draft | Delayed. There were timeline delays in receiving a signed LOC from the Ministry in eSwatini. The activity thus will be finalized in Year 2 |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **Intervention 4.06** | | | | | | |
| **ZAMBIA (on- and off-grid electrification strategy)** | | | | | | |
| **Prepare simplified geospatial model using available information. In Zambia, include small hydro. (Full model planned under WB funding)**<br>**YI.04.06.01.ZMB** | Adam Kendall (McKinsey) | 1/10/2018 – 6/30/2018 | Leading practice for visualizing current electrification | OC1.02, OC1.04 | Simplified geospatial model in Zambia (will build off the IRP and rural electrification Master Plans and utility current electrification maps) | Model was completed and dissemination workshop was held. The WB will apply the model to develop an electrification strategy for Zambia |
| **Approach to support REA in executing its last mile connections under the WB program**<br>**YI.04.06.02.ZMB** | Adam Kendall (McKinsey) | 2 months after ZESCO LOC signed | Leading practice | OC4.08 | Report on the approach to support REA in executing its last mile connections under the WB program accompanied by letters of collaboration with development partners and counterparties | Not moved to Year 2 as the WB program is still working to define how they will work on the issue and whether SAEP assistance is needed |
| **Initial support to REA and private sector SHS providers to scale up residential SHS connections**<br>**YI.04.06.03.ZMB** | Adam Kendall (McKinsey) | 10/16/2017 – 3/30/2018 | Leading practice | OC4.07<br>OC4.08 | Report on the support to REA and private sector SHS providers to scale up residential SHS connections | Completed |
| **Establish a "program management unit" or "delivery unit" to execute the ~22000 last mile connections under the WB funded program**<br>**YI.04.06.04.ZMB** | McKinsey | On hold | REA request for assistance | OC4.08 | Program Management unit in place with processes/dashboards/ routines – will track capability building under OC4.08 | Activity timeline delayed given uncertainty around the role of REA and ZESCO<br>This activity will not occur in Year 2 |
| **Support transfer of Geospatial model to WB and Government of Zambia counterparts** | McKinsey | 2/1/2018 – 8/15/2018 | Leading practice for visualizing path to universal | OC1.02, OC1.04 | Updated model including productive use analysis to understand impact on mini-grid scale up | Completed. Conducted training for Department of Energy, and transferred the model to the |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
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| **YI.04.06.05.ZMB** | | | access in a least cost manner | | Model (in Python and Google Earth) and data sets supported by methodology description in PowerPoint<br><br>Meeting notes and presentations | WB for inclusion into their work |
| **Support to proposed Geospatial model working group**<br><br>**YI.04.06.06.ZMB** | McKinsey | 4/30/2018 – 9/30/2018 | Ensure counterparty buy-in to results and supports capability building to maintain model | OC1.02, OC1.04 | Updated model including productive use analysis to understand impact on mini-grid scale up<br><br>Model (in Python and Google Earth) and data sets supported by methodology description in PowerPoint<br><br>Meeting notes and presentations | Completed. Initial discussions have been held with the WB, REA and the Department of Energy |
| **MADAGASCAR (off-grid electrification strategy)** | | | | | | |
| **Consultation with private sector on off-grid pilots and mini-grid investments and lessons for ADER**<br><br>**YI.04.06.10.MDG** | Adam Kendall (McKinsey) | 10/1/2017 – 9/30/2018 | Leading practice | OC4.07 | Meeting notes with Baobab+ and recommendations<br><br>LOC with ADER | Completed. This has resulted in TTS to Baobab+ and EOSOL |
| **Conduct a rapid technical assessment of the feasibility of Tender process support**<br><br>**YI.04.06.11.MDG** | | 8/1/2018 – 9/30/2018 | ADER request<br><br>Coordination with GIZ and UNDP (hydro) | OC4.08 | Sector diagnostic<br><br>Will include evaluation of current zones, whether the zone process is the most efficient and assistance to GIZ on current procurement program of ADER where support is needed | Completed and included in LOC with ADER. Further conversations with GIZ will continue before AP3 assistance |
| **Provide assistance to the technical studies and transaction advisory for the rehabilitation of** | | 6/15/2018 – 9/30/2018 | ADER request | OC4.08, OC1.04 | Report detailing elements of roll out program and implications | Activity scope developed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **abandoned diesel-based concessions**<br>**Y1.04.06.12.MDG** | | | | | | |
| **SAVA region off-grid electrification**<br>**Y1.04.06.13.MDG** | Rija Rakotoson | 6/1/2018 – 9/1/2018 | SAEP Concept | OC4.01 | Report detailing various business models with advantages and disadvantages for electrification<br>More detailed deliverables will be outlined in the SOW | Activity scope developed |
| **University engineering and social sciences program for solar off-grid design**<br>**Y1.04.06.14.MDG** | Rija Rakotoson | 6/1/2018 – 9/1/2018 | SAEP Concept | OC4.01 | Framework agreement signed with the University | LOC signed |
| **NAMIBIA (rural electrification strategy)** | | | | | | |
| **Review current rural electrification masterplans (grid and off-grid) and update strategy based on assessment of technology mix, costs and funding**<br>**Y1.04.06.11.NAM** | Jorry Mwenechanya<br>Namibia Country Manager | 7/1/2018 – 9/30/2018 | Ministry of Energy request | OC1.04 | MME LOC<br>Comments on rural electrification strategy | MME asked SAEP to wait until kick-off with WB geospatial program. LOC has not been signed |
| **Electrification of peri-urban area of Windhoek**<br>**Y1.04.06.13.NAM** | Adam Newman<br>David Jarrett | 6/1/2018 – 9/21/2018 | City of Windhoek request | OC1 | Action Plan for electrification | Activity initiated. LOC was approved by City Council and signed |
| **Intervention 4.07** | | | | | | |
| **REGIONAL** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Review the capital map and investment barrier analysis focused on small-scale renewable energy project development**<br><br>**Y1.04.07.01.REG** | Frederik Benzel, (CrossBoundary) | 7/15/2017 – 10/30/2017 | Transaction tracking for MWs | OC4.01 | Capital map and Transaction tracker (including input sheet for the PATT) | Completed |
| **Train local loan/credit officers on risks and risk management in power projects**<br><br>**Y1.04.07.05.REG** | Financial Advisor | 4/1/2018 – Ongoing | SAEP concept | | Provide training to loan/credit officers as required to active power projects | This activity has been delayed |
| **Training and awareness with governments to allow, encourage pension fund investments in energy products**<br><br>**Y1.04.07.07.REG** | Frederik Benzel (CrossBoundary)<br><br>Legal advisor (regulatory reviews & proposed amendments) | 7/5/2017<br><br>– Ongoing | SAEP concept | OC4.01 and 4.06 | Inception report and engagement roadmap<br><br>Presentations and material, as required, for training sessions<br><br>Report on feedback and findings from engagement and training sessions with pertinent stakeholders | Delayed. The team needs to get the materials from NASP that was developed and then work to design how the materials could be used to design an awareness campaign /meetings with governments to try to increase local and international pension fund investments in energy projects |
| **Intervention 4.08** | | | | | | |
| **ZAMBIA** | | | | | | |
| **Develop, deploy a selection tool for REAs targeting and prioritizing opportunities for[21]:**<br><br>• **Grid**<br>• **Micro-grid with anchor load**<br>• **Individual household**<br>• **Incorporate tool in electrification master plan** | McKinsey | 7/5/2017 – 5/15/2018 | SAEP concept confirmed by counterpart beneficiary | OC4.06 | Tool produced and disseminated<br><br>Use of tool demonstrated<br><br>Procedures incorporated in rural electrification master plans | Completed. GIS map was developed which includes least cost generation tool. This will be incorporated into the WB's work on electrification strategy |

[21] Possible collaboration with SIDA in Zambia, WB in Madagascar and DFID in Malawi.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.04.08.01.ZMB** | | | | | | |
| **Assist REAs to implement low-cost grid extension solutions:**<br><br>**Assist REAs to develop specifications and standards to meet minimum utility requirements of low cost solutions building on the strategy developed in OC4.06**<br><br>**Y1.04.08.04.ZMB** | Jorry Mwenechanya | On hold | SAEP concept | OC4.06 | Specifications and standards of low cost solutions to meet ZESCO standards produced<br><br>New connections in existing grid extensions | On hold. This may not be needed because ZESCO has not yet developed a policy for low cost electrification solutions<br><br>The team will be implementing low-cost electrification solutions for the City of Windhoek and those experiences can be shared with other SAEP countries |
| **Support in optimizing/promulgating regulations to support scale up off-grid solutions in Zambia**<br><br>**Y1.04.08.12.ZMB** | Adam Kendall (McKinsey) | 4/15/2018 – 9/30/2018 | Follows from above | OC1.01 | Report outlining the regulations required to support scale up of off-grid electrification solutions<br><br>Work plan for regulation adoption | Completed and ongoing |
| **Support to the private sector SHS players through the Solar Association's Solar Home Expansion Program**<br><br>**YI.04.08.13.ZMB** | McKinsey | 12/1/2017 – 9/30/2018 | Deal with bottlenecks identified by counterparties in diagnostic | OC4.06 | Ongoing progress reports on dealing with issues. Initial set of initiatives are i) common logistics as part of go to market approach ii) "Go Solar" campaign and iii) Quality standards | Completed and ongoing |
| **Capacity building for off-grid sector counterparties including REA, ZESCO and the Department of Energy**<br><br>• **Use of geospatial analysis tools**<br><br>• **Off-grid market dynamics**<br><br>**Y1.04.08.14.ZMB** | McKinsey | 10/15/2018 – 5/5/2018 | Create a leveling playfield and common understanding amongst all the stakeholders | OC4.06 | Collateral used in one on one sessions or workshops with counterparties | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Support to Off-Grid Taskforce convened by Government of Zambia and supported by REEEP**<br>• **Determine changes needed in the legislative, regulatory and fiscal environment to support scale up**<br>• **Determine capability building support needed to counterparties**<br>• **Determine support needed from cooperating parties**<br>**YI.04.08.15.ZMB** | McKinsey | 2/1/2018 – 9/30/2018 | Mechanism created to deal with prioritized bottlenecks preventing scale up of SHS and Mini-grids | OC4.06 | Documents and notes used taskforce meetings<br>Documents on specific analysis done to support work of the taskforce – e.g., off-grid subsidies for consumers/developers | Ongoing |
| **REA mini-grid procurement**<br>**Y1.04.08.16.ZMB** | Sri Sekar | 2/10/2018 – 9/30/2018 | REA request | OC1.04 | Procurement Roadmap<br>RFP documents | Completed by incorporating this into EU/IFC procurement. Report out briefing on review of bids from EOI will be completed in November 2018 |
| **MALAWI** | | | | | | |
| **Define support to private sector SHS providers to establish industry and scale up residential SHS connections**<br>**YI.04.08.16.MWI** | McKinsey | 4/1/2018-5/30/2018 | Leading practice | OC2.01, OC4.06, OC4.07 | Presentation on proposed approach to support private sector SHS providers<br>Presentation on implementation plan for private sector SHS support | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Execute implementation plan for support to private sector SHS providers**<br><br>**Y1.04.08.17.MWI** | McKinsey | 6/1/2018-9/30/2018 | Follows from sector assessment | OC2.01, OC4.06 | Presentation on establishment of driving mechanism for implementation plan<br><br>Documents from SHS kick-starter/accelerator intervention 1<br><br>Documents from SHS kick-starter/accelerator intervention 2<br><br>Documents from SHS kick-starter/accelerator intervention 3Documents and notes from interactions with private sector players and government counterparties<br><br>Documents capturing analysis and support provided to sector taskforce/s set up to scale up off-grid connections<br><br>Recommendations to changes in policy/regulations/standards/legislation | Completed |
| **Intervention 5.01** | | | | | | |
| **Conduct utility institutional capacity benchmarking**<br><br>**Y1.05.01.01.REG** | Lee Mazanec | 8/28/2017 – 9/30/2018 | SAEP M&E performance metric | | Benchmarking tool for institutions<br><br>Report for SAEP leadership. Informing annual Work Plan effectiveness | Completed benchmark tool for TNA use |
| **Develop a training plan for Y1 targeted utilities based upon TNA results. (Training Needs Assessments)**<br><br>**Y1.05.01.03.REG** | Lee Mazanec | TNA tool development 4 months<br><br>3 months from to complete pilot TNA<br><br>1 month to complete training plan after that | SAPP, request for assistance, and SAEP requirement | | Two utility training plans | TNA Tool Development complete and the survey tool has been integrated into an online survey platform.<br><br>Completed for LEC. |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Implement a TNA for LEC**<br>**Y1.05.01.04.LSO** | Lee Mazanec | 3/15/2018 – 6/30/2018 | SAEP Concept | OC2; Cross-cutting | TNA Survey Results Report | Completed<br>This activity was separated out from Y1.05.01.04.REG (Implement a TNA for two utilities) |
| **Implement a TNA for EDM**<br>**Y1.05.01.04.MOZ** | Lee Mazanec | 5/15/2018 – 9/30/2018 | SAEP concept | OC2; Cross-cutting | TNA Survey Results Report | Behind Schedule. Awaiting LOC and Rollout Plan between SAEP and EDM |
| **RERA training augmentation (building on Trade Hub work)**<br>**Y1.05.01.06.REG** | Lee Mazanec | 6/7/2017 – 9/30/2018 | RERA request | Linked to activity above<br>OC4.03 | Two training modules and training piloted | Delayed. When new OC5 lead is onboard the team will complete the development of the e-modules. Priority modules identified as Regulatory Governance and Regulatory Impact Assessment. Governance Module is suitable for e-learning. Impact Assessment Module better suited for classroom. |
| **Compile a database of the existing energy sector training in the region**<br>**Y1.05.01.07.REG** | Malcolm Fawkes<br>Lee Mazanec | 7/19/2017 | Leading practice | Cross-cutting | Catalogue | Catalogue complete |
| **RERA sustainable training business model**<br>**Y1.05.01.09.REG** | Lee Mazanec | 10/1/2017 – 11/30/2017 | SAEP proposal | Cross-cutting | RERA Strategic plan which contains sustainability principles | Completed workshop with RERA. Waiting on receiving the final Strategic Plan from RERA. The team will work in Year 2 to help RERA implement sustainable model |
| **SAPP CC business review**<br>**Y1.05.01.12.REG** | Malcolm Fawkes | TBD | SAPP activity list request | OC3 | Report on operational audit process for capacity building and the findings | Delayed pending discussions with SAPP about what to be included in the scope |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| | | | To establish baseline for capacity building | | | |
| **Training on cross-border planning, system optimization models from work in OC3**<br>**Y1.05.01.14.REG** | Willem Theron | 8/30/2018 – Year 2 | Priority to help open the markets and empower stakeholders | OC3 | Training materials and training report | Moved to Year 2 |
| **Provide support to the SADC Energy Thematic Group (ETG) in organizing regional events and trainings**<br>**Y1.05.01.18.REG** | Rajiv Weeraratne | Life of Program | Request from | Cross-Cutting | Administrative, Operational and materials support for ETG | Completed |
| **Intervention 5.02** | | | | | | |
| **RFQ for vendors to support RE priorities coming from the TNA**<br>**Y1.05.02.01.REG** | Malcolm Fawkes<br>Willem Theron | 1/15/2018 – 9/30/2018 | SAEP proposal to expedite training | OC4 | SOWs for potential Year 2 work | Completed. Clarified commercial process |

## PMO AND CROSS CUTTING–SPECIFIC ACTIVITIES

Below are the PMO- and Cross-Cutting- specific activities are from the Year 1 Work Plan. Any activities that are direct replications of the above Outcome-specific activities have been excluded from the below table. This table is to track the status of the activities and to highlight any activity changes, timing changes or other major items related to activities that SAEP would like to highlight for the period.

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Grants / Catalyzing Local Opportunities Fund** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Draft and Submit CLOF Manual (Grants Manual)**<br>**Y1.PMO.CLF.01** | Mariela Tsvetkovska | 4/20//2017 – 07/19/2017 | Contract requirement | NA | CLOF Manual (Submitted 90 days after post-award conference date) | Completed. Final CLOF Manual was approved on 10/13/2017 |
| **RFA for storage or rural electrification released (Pending CLOF/Grants Manual approval)**<br>**Y1.PMO.CLF.02** | Grants Manager, Jorry Mwenechanya | Year 1 | Multiple stakeholders have mentioned need | OC4 | SAEP tender documents | In progress for SHS Malawi |
| **RFA developed**<br>**Y1.PMO.CLF.03** | Technical Outcome Leads | Year 1 | Leading practice | | RFA | In progress for SHS Malawi |
| **RFA released and then applications reviewed. Award released**<br>**Y1.PMO.CLF.04** | Grants Manager, Technical review team | Year 1 | Leading practice | | Evaluation documents<br>Grant award | Delayed for year 2 |
| **Annual Program Statement (pending CLOF/Grants Manual approval)**<br>**Y1.PMO.CLF.05** | Grants Manager, Technical Outcome Leads | Year 1 | Leading practice | | SAEP Annual Program Statement (published with launch of Grants Management Platform | Delayed for year 2 |
| **Annual Program Statement released**<br>**Y1.PMO.CLF.06** | Grants Manager | Year 1 | Leading practice | | | Delayed for year 2 |
| **Review responses and determine if Request for applications (RFA) will be released**<br>**Y1.PMO.CLF.07** | Grants Manager | Quarterly | Leading practice | | Evaluation documents | Ongoing |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **RFA developed**<br>**Y1.PMO.CLF.08** | Technical Outcome Leads | Quarterly | Leading practice | | RFA | Ongoing |
| **RFA released and then applications reviewed. Award released**<br>**Y1.PMO.CLF.09** | Grants Manager, Technical review team | Quarterly | Leading practice | | Evaluation documents<br>Grant award | Ongoing |
| **Letter of Interest (LOI)**<br>**Y1.PMO.CLF.10** | Grants Manager, Jorry Mwenechanya | Ongoing | Multiple stakeholders have mentioned need | | Shortlist of organizations | Ongoing |
| **RFA developed for shortlisted organizations**<br>**Y1.PMO.CLF.11** | Technical Outcome Leads | Ongoing | Leading practice | | RFA | Ongoing |
| **RFA released and then applications reviewed. Award released**<br>**Y1.PMO.CLF.12** | Grants Manager, Technical review team | Ongoing | Leading practice | | Evaluation documents<br>Grant award | Ongoing |
| **Use Local Opportunities Catalyzing Fund to support well-developed proposals for on- and off-grid generation, including fund-raising support**<br>**Y1.PMO.CLF.13** | Jorry Mwenechanya | 4/1/2018 – Ongoing | SAEP concept | Grants, OC4.01 and OC4.06 | Use Local Opportunities Catalyzing Fund to support well-developed proposals | In process of setting up grant program. Once the program is established, this activity can move forward |
| **Knowledge Management and Reporting** | | | | | | |
| **Hold Start Up Meeting with SAEP COR** | Craig VanDevelde | 3/15/2017 – 3/20/2017 | | | N/A | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.PMO.KMR.01** | | | | | | |
| **Draft and Submit Branding Implementation Plan (BIP) and Marking Plan**<br>**Y1.PMO.KMR.02** | Liz Pfeiffer; Dennis Hall | 3/15/2017 – 5/1/2017 | Contract requirement | | Finalized and approved BIP & MP | Completed. Final BIP & MP approved on 4/29/2017 |
| **Send Biweekly Updates and Planned Future Activities, Events, and Travel**<br>**Y1.PMO.KMR.03** | Liz Pfeiffer | Ongoing | Contract requirement | | Biweekly Updates (every two weeks) | On Schedule |
| **Draft and Submit Communications Strategy**<br>**Y1.PMO.KMR.04** | Dennis Hall | 3/15/2017 – 6/4/2017 | Contract requirement | | Communications Strategy (Submitted 45 days after Award date) | Completed. Final Communications Strategy approved on 7/27/2017 |
| **Draft and Submit Integrated Annual Work Plan**<br>**Y1.PMO.KMR.05** | Liz Pfeiffer; Dennis Hall | 3/15/2017 – 6/20/2017 | Contract requirement | | Integrated Annual Work Plan (Submitted to TOCOR within 30 days of every subsequent year of period of performance) | Completed. Year 1 Work Plan approved on 9/18/2017. Revised Year 1 Work Plans are submitted after each Quarterly Report is finalized |
| **Draft and Submit Performance Management and Evaluation Plan (PMEP)**<br>**Y1.PMO.KMR.06** | Liz Pfeiffer; Dennis Hall | 3/15/2017 – 7/19/2017 | Contract requirement | | Finalized and approved PMEP (Submitted within 90 days of contract award date) | Completed. Version 4 of the PMEP was submitted on 5/17/2018 |
| **Insert M&E indicators into AidTracker**<br>**Y1.PMO.KMR.07** | M&E Specialist | 7/30/2017 | Contract requirement | | | Completed for this quarter |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Draft and Submit Environmental Mitigation and Monitoring Plan (EMMP)**<br>**Y1.PMO.KMR.08** | Liz Pfeiffer | 3/15/2017 – 7/19/2017 | Contract requirement | | EMMP (Submitted 90 days after Award date) | Completed. Final EMMP approved on 9/14/2017 |
| **Draft and Submit Complete Trip Reports**<br>**Y1.PMO.KMR.09** | Team member completing trip<br>Liz Pfeiffer | 3/15/2017 – Ongoing<br>(Within 1 work week of each trip) | Contract requirement | | Trip Reports | Completed |
| **Collect/Analyze Data from SAEP Staff, counterparts; Ongoing submissions of datasets/documents to the Development Library**<br>**Y1.PMO.KMR.10** | Liz Pfeiffer; Knowledge Manager | 3/15/2017 – Ongoing | Contract requirement | | Ongoing Submissions of Datasets/Documents to the Development Library | Completed |
| **Draft and Submit Quarterly Progress Reports; Includes Success Stories and project summary documents**<br>**Y1.PMO.KMR.11** | Liz Pfeiffer; Communications Lead | 3/15/2017 – Ongoing | Contract requirement | | Quarterly Progress Reports (within 30 days after the end of each quarter of performance); Success Stories; Program Summary Documents | Completed |
| **Complete Quarterly Update of PATT**<br>**Y1.PMO.KMR.12** | Liz Pfeiffer; Frederik Benzel (CrossBoundary) | 3/15/2017 –Ongoing | Contract requirement | | Quarterly PATT data entry (within 30 days after the end of each quarter of performance) | Completed |
| **Draft and Submit Quarterly Financial Reports and Accruals**<br>**Y1.PMO.KMR.13** | Rajiv Weeraratne | 3/15/2017 –Ongoing | Contract requirement | | Quarterly Financial Reports and Accruals (Submitted 30 days after the completion of each quarter) | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Draft and Submit Annual Performance Management Reports**<br><br>**Y1.PMO.KMR.15** | Liz Pfeiffer | 3/15/2017 – Ongoing | Contract requirement | | Performance Management Progress Reports (Submitted within 30 days after end of FY) | On schedule |
| **Monitoring and Evaluation** | | | | | | |
| **Draft and Submit Performance Management and Evaluation Plan (PMEP)**<br><br>**Y1.PMO.MEL.01** | Liz Pfeiffer; Dennis Hall | 3/15/2017 – 7/19/2017 | Contract requirement | Y1.PMO.KMR.06 | Finalized and approved PMEP (Submitted within 90 days of contract award date) | Completed. Version 4 of the PMEP was submitted on 5/17/2018 |
| **Baseline Activities for M&E indicators where required:**<br>- **#3 Energy efficiency**<br>- **#8 Institutional capacity**<br>- **#10 Aggregate losses**<br>- **PA Tracking Indicators**<br><br>**Y1.PMO.MEL.02** | Energy Efficiency Specialist<br><br>Lee Mazanec<br><br>Loss Reduction Specialist<br><br>M&E Specialist in coordination with PA | In process | Leading practice | | Baseline methodology and research in report format to integrate into M&E<br><br>The least cost approach using open source data will be used where applicable. For EE and institutional capacity surveys and baselining tools will be developed and SOWs for these will be shared with COR | In process. Institutional capacity benchmarking covered by activity in OC5 and initial data collection is complete |
| **Finalize the M&E database and reporting tool**<br><br>**Y1.PMO.MEL.03** | Liz Pfeiffer; Dennis Hall | 7/1/2017 – 8/15/2017 | Leading practice | | Internet-accessible M&E reporting and analysis tool<br><br>Tableau Dashboards | Complete |
| **Draft and Submit Quarterly Progress Reports M&E data update**<br><br>**Y1.PMO.MEL.04** | M&E Lead | 3/15/2017 – Ongoing | Contract requirement | | Quarterly Progress Reports M&E status | On schedule |
| **Gender** | | | | | | |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Design and conduct a Gender Action Plan**<br>**Y1.PMO.GEN.01** | Gender Specialist | 8/15/2017 – 01/15/2018 | Leading practice | | Gender Action Plan<br>Gender criteria for grants programs | Gender Action Plan submitted on 2/18/2018. COR approval received 5/3/2018 |
| **USAID workshop to discuss Gender Action Plan**<br>**Y1.PMO.GEN.02** | Gender Specialist | 12/5/2017 | USAID MEL office request | | Gender Action Plan presentation | Conducted workshop for Gender Action Plan. Post-workshop materials were sent to USAID |
| **Explore opportunities to support women owned companies in electrification efforts**<br>**Y1.PMO.GEN.03** | Gender Specialist | 7/15/2017 – Ongoing | Leading practice | OC4.06, OC4.07 | Ongoing | Ongoing |
| **Provide peer review to SACREEE and NREL Gender Strategy in Energy**<br>**Y1.PMO.GEN.04** | Gender Specialist | TBD | SACREEE request | OC4 | Comments on Gender Strategy on Energy | In progress |
| **Transaction Advisory Service Fit Check Assessment includes gender weight**<br>**Y1.PMO.GEN.05** | Frederik Benzel (CrossBoundary) | Ongoing | Leading practice | OC4.01 | Capital Mapping and transaction pipeline | Completed |
| **Communication and Outreach** | | | | | | |
| **Communications Strategy**<br>**Y1.PMO.COM.01** | Renata Petrusevska<br>Dee Bennett (Another Option) | 4/1/2017 – 6/4/2017 | Contract requirement | | Communications Strategy | Completed. Final Communications Strategy approved on 7/27/2017 |
| **Communications Strategy Implementation Guide** | Rose Mary Romano (Another Option) | 6/5/2017 – 7/14/2017 | Leading practice | | Communications Strategy Implementation Guide | Completed |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.PMO.COM.02** | | | | | | |
| **Branding and Marketing Plan updates as required**<br>**Y1.PMO.COM.03** | Dee Bennett (Another Option) | 6/30/2017 – Ongoing | Leading practice | | Revisions to Branding and Marketing Plan | Ongoing |
| **Knowledge Management Strategy and Action Plan**<br>**For internal KM and external for the project**<br>**Will include scoping of website options on RERA, SAPP or SADC sites**<br>**Y1.PMO.COM.04** | Susan Smith (Another Option) | 6/1/2017 – 8/18/2017 | Leading practice | | Knowledge Management Strategy and Action Plan | First drafts completed. Additional items may be added |
| **Success stories**<br>**Y1.PMO.COM.05** | Communications Lead | 10/15/2017 – Ongoing | Leading practice | | Publish at least 5 success stories or project highlights | Ongoing. Two success stories were developed this quarter |
| **Press releases**<br>**Y1.PMO.COM.06** | Communications Lead | 5/13/2017 – Ongoing | Leading practice | | Publish 3 press releases or as many as needed | Ongoing. One press release was completed for the Zambia GIS model this quarter |
| **Regular updating of project social media**<br>**Y1.PMO.COM.07** | Communications Lead | Ongoing | Leading practice | | | NA currently |
| **Develop SOWs and Qualifications for professional positions and/or third party service providers for Communications and Outreach** | Rose Mary Romano (Another Option) | 6/15/2017 – 9/8/2017 | Leading practice | | Graphic designer on retainer<br>Local Communications and Outreach lead | Completed. Shamiso Matambanadzo was brought on as the local Communications Specialist |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Y1.PMO.COM.08** | | | | | | Additional SOWs will be prepared on an as-needed basis |
| **Partnerships, Alliances, and Coordination** | | | | | | |
| **Develop partnership map to guide partnership and alliance strategies**<br>**Y1.PMO.PRT.01** | Liz Pfeiffer | 4/20/2017 – 7/21/2017 | Leading practice | | Partnerships map | Completed |
| **Improve local Banks and financial institutions understanding of off-grid business models**<br>**Y1.PMO.PRT.02** | Frederik Benzel (CrossBoundary) | 7/17/2017 – 9/30/2017<br>Refreshed ongoing | Leading practice and builds on PA work in East and West Africa | | As part of capital mapping | Completed |
| **Establish MOUs or other partnership agreements with SACREEE**<br>**Y1.PMO.PRT.03** | Jorry Mwenechanya<br>Tshego Neeuwfan | 7/7/2017 – 9/30/2018 | SACREEE request | | MOUs or partnership agreement documents | In process activities have been agreed to |
| **Attend events, speak at and provide support to renewable energy associations**<br>**Y1.PMO.PRT.05** | Jorry Mwenechanya | As required | Leading practice | | Presentations and other preparation materials | On schedule<br>SAEP supported SIAZ in Zambia, focusing on scaling up SHS operations |
| **Environmental Compliance and Climate Resilience** | | | | | | |
| **Draft and Submit Environmental Mitigation and Monitoring Plan (EMMP)**<br>**Y1.PMO.ENV.01** | Environmental Advisor | 3/15/2017 – 9/1/2018 | Contractual requirement | Y1.PMO.KMR.08 | EMMP (Submitted 90 days after Award date)<br>Update to include Climate Risk Management | Completed. Final EMMP approved on 9/14/2017 |

| Activities | SAEP Activity Lead(s) | Start/End Dates | Reasoning / Buy-In | Linkages | Deliverable(s) | Status |
|---|---|---|---|---|---|---|
| **Quarterly review of Environmental Compliance**<br>**Y1.PMO.ENV.02** | Environmental Advisor | 7/30/2017 – Quarterly | Contractual requirement | | EMMP quarterly update | Ongoing |
| **TA on project development documents as required by transactions**<br>**Y1.PMO.ENV.03** | Environmental Advisor | As required | Leading practice | | EIAs and other project deal documents as required | Ongoing |
| **SAPP hydropower planning – resource balancing/ climate change**<br>**Y1.PMO.ENV.04** | Willem with Environmental Advisor | TBD | SAPP request | | Planning training in conjunction with other work at SAPP | Delayed. Need to select champion for work to begin |
| **Assistance with environmental requirements on grants; review of grant applications for environmental considerations**<br>**Y1.PMO.ENV.05** | Environmental Advisor | 8/1/2017 – 10/1/2017<br>As needed | Leading practice | | Environmental criteria for grant TOR<br>Grant evaluation form | Ongoing |
| **Administration and Operations** | | | | | | |
| **Program administration and operations (all work streams)**<br>**Y1.PMO.ADM.01** | Rajiv Weeraratne,<br>Adam Newman | 3/15/2017 – Ongoing | Required | | Program operations and management support | Ongoing |

# APPENDIX J SAEP YEAR 2 QUARTERLY TARGETS

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Indicator** | **Q1 FY 19** | **Q2 FY 19** | **Q3 FY 19** | **Q4 FY 19** | **Year 2 Total** | **Notes** |
| **New Generation/Transaction Indicators** | | | | | | | |
| **1 / PA1** | **(#AA) Capacity (MW) from Transactions Supported by SAEP that Achieved Financial Closure (4.8.2-33 and PA)** | **1,040** | **86** | **76** | **150** | **1,352** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 1352 MW**<br>The following transactions are expected to reach FC in FY 2019:<br>**Quarter 1**<br>• Salima Solar PV Project 18 MW: 12/2018<br>• Mozambique – Malawi 1000 MW: 12/2018<br>• Rooftop Solar Portfolio 22 MW: 12/2018<br>**Quarter 2**<br>• Sunelex: Matjhabeng Solar 66 MW: 03/2019<br>• OnePower Lesotho 20 MW: 03/2019<br>**Quarter 3**<br>• District Power 8 MW: 06/2019<br>• EDF-Innowind 15 MW: 05/2019<br>• RSSC Grid-Tied Solar PV Plants 10 MW: 06/2019<br>• Golomoti Solar 18 MW: 06/2019<br>• Lilongwe Solar 25 MW: 12/2018<br>**Quarter 4**<br>• EEC Lavumisa 10 MW: 07/2019<br>• Solar Reserve Urban Solar Farm 10 MW: 09/2019<br>• Access Power 130 MW: 09/2019 |
| **2 / PA2** | **Generation and Transmission capacity (MW) pending financial closure (PA)** | **9,390.38** | **9,390.38** | **9,390.38** | **9,390.38** | **9,390.38** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 7,774.38**<br>9,390.38 MW includes: 2,130.38 MW that reached financial close in FY 2018. Installed capacity for Mozambique–Malawi is 1,000 MW, Temane Transmission 900 MW and ZTK is 500 MW |
| | Gx MW pending financial close | 4,795.00 | 4,774.00 | 4,723.00 | 4,573.00 | 4,573.00 | |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Indicator** | **Q1 FY 19** | **Q2 FY 19** | **Q3 FY 19** | **Q4 FY 19** | **Year 2 Total** | **Notes** |
| | Gx MW reached financial close | 2,195.38 | 2,216.38 | 2,267.38 | 2,417.38 | 2,417.38 | |
| | **Gx Total** | **6,990.38** | **6,990.38** | **6,990.38** | **6,990.38** | **6,990.38** | |
| | Tx MW pending financial close | 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | 1,400.00 | |
| | Tx MW reached financial close | 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | 1,000.00 | |
| | **Tx Total** | **2,400.00** | **2,400.00** | **2,400.00** | **2,400.00** | **2,400.00** | |
| **3 / PA3** | **Generation Capacity (MW) Commissioned (PA)** | **0** | **0** | **0** | **264.62** | **264.62** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 264.62**<br>The following transactions are expected to be commissioned in FY 2019:<br>**Quarter 3**<br>• Aggeneys Solar 40 MW: 07/2019<br>• Golden Valley Wind 117.72 MW: 07/2019<br>• Konkoonsies II Solar 75 MW: 07/2019<br>• Excelsior Wind 31.9 MW: 07/2019 |
| **Access Indicators** | | | | | | | |
| **5 / PA11** | **(#AB) Direct Electricity Access (PA) (millions of connections)** | **36,143** | **84,355** | **124,536** | **154,966** | **400,000** | **FY 2019 PMEP Target: 400,000**<br>**FY 2019 New Target: 400,000**<br><br>**Off-Grid** |

<table>
<tr><th colspan="8">SAEP YEAR 2 QUARTERLY TARGETS</th></tr>
<tr><th>#</th><th>Indicator</th><th>Q1 FY 19</th><th>Q2 FY 19</th><th>Q3 FY 19</th><th>Q4 FY 19</th><th>Year 2 Total</th><th>Notes</th></tr>
<tr><td></td><td>Off Grid</td><td>21,143</td><td>34,905</td><td>42,786</td><td>44,886</td><td>143,720</td><td>
<table>
<tr><th>Quarter 1</th><th>Quarter 2</th><th>Quarter 3</th><th>Quarter 4</th></tr>
<tr><td>• Zambia: 11,643<br>• Mozambique: 7,000<br>• Madagascar: 2,500</td><td>• Zambia: 19,405<br>• Mozambique: 13,000<br>• Madagascar: 2,500</td><td>• Malawi: 2,000<br>• Zambia: 23,286<br>• Mozambique: 15,000<br>• Madagascar: 2,500</td><td>• Malawi: 3,000<br>• Zambia: 23,286<br>• Mozambique: 16,000<br>• Madagascar: 2,600</td></tr>
</table>
On-Grid
</td></tr>
</table>

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **#** | **Indicator** | **Q1 FY 19** | **Q2 FY 19** | **Q3 FY 19** | **Q4 FY 19** | **Year 2 Total** | **Notes** | | | |
| | On Grid | 15,000 | 49,450 | 81,750 | 110,080 | 256,280 | | | | |
| | | | | | | | ***Quarter 1*** | ***Quarter 2*** | ***Quarter 3*** | ***Quarter 4*** |
| | | | | | | | • Mozambique: 15,000 | • Malawi: 18,000<br>• Zambia: 2,450<br>• Mozambique: 20,000<br>• Angola: 9,000 | • Malawi: 35,000<br>• Zambia: 2,750<br>• Mozambique: 30,000<br>• Angola: 13,000<br>• Namibia: 1,000 | • Malawi: 45,000<br>• Zambia: 3,080<br>• Mozambique: 45,000<br>• Angola: 15,000<br>• Namibia: 2,000 |
| **4 / PA10** | **Number of New Grid and Off-Grid Projected Direct** | **2,175,775** | **600,000** | **0** | **0** | **2,775,775** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 2 775 775**<br>**On grid**<br>***Quarter 1***<br>• EDM: 900,000 | | | |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Indicator** | **Q1 FY 19** | **Q2 FY 19** | **Q3 FY 19** | **Q4 FY 19** | **Year 2 Total** | **Notes** |
| | **Connections (PA) (millions of connections)** | | | | | | • City of Windhoek: 40,000<br>• ZESCO: 34,000<br>***Quarter 2***<br>• Angola: 300,000<br>• Malawi: 300,000<br>**Off grid**<br>***Quarter 1***<br>• Malawi: 300,000<br>• Zambia: 884,275<br>• Mozambique: 17,500 |
| | Off Grid | 1,201,775 | 0 | 0 | 0 | 1,201,775 | |
| | On Grid | 974,000 | 600,000 | 0 | 0 | 1,574,000 | |
| **System Efficiency Indicators** | | | | | | | |
| **6 / PA12** | **Electricity Loss Reduction (Aggregate Losses (PA)** | | | | | | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 0**<br>SAEP will not be undertaking any activity relating to this indicator in FY 2019. |
| **7 / PA13** | **Energy Efficiency or Energy Conservation (4.8.2-31)** | **To be estimated when EE initiatives and loss reduction utilities are selected and baselines are calculated. Baselines set by country and specific targeted EE initiatives in coordination with utilities in the countries where EE activities are implemented.** | | | | | EE activity for Y2 have yet to be fully scoped, forecasted target to be added at the end of 2019 Q1. |
| **Product Indicators** | | | | | | | |
| **8 / PA15** | **(#Y) Number of Laws, Policies, Strategies, Plans, or Regulations Officially Proposed, Adopted, or Implemented (4.8.2-28) (PA)** | **4** | **1** | **3** | **0** | **8** | **FY 2019 PMEP Target: 13**<br>**FY 2019 New Target: 8**<br>**Quarter 1**<br>• DSM model regulations – Y2.04.05.03.NAM<br>• ERB communication plan for rate cases – Y2.01.01.02.ZMB<br>• Strategic Plan – Y1.02.02.07.LSO LEC<br>• EDM Community Engagement Strategy – Y1.02.05.08.MOZ<br>**Quarter 2**<br>• EDM PMO Procedures, Manuals and PMO Toolkit – Y2.02.06.01.MOZ<br>**Quarter 3**<br>• MME & ECB adjusted regulation for operationalizing maximum benefit from the DSM program – Y2.04.05.05.NAM |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **#** | **Indicator** | **Q1 FY 19** | **Q2 FY 19** | **Q3 FY 19** | **Q4 FY 19** | **Year 2 Total** | **Notes** |
| | | | | | | | • City of W Windhoek Action Plan for electrification – Y2.04.06.22.NAM<br>• Regulatory framework developed for ERB, ZESCO, CEC and Chambers of Mines – Y2.04.05.01.ZMB |
| **9** | **Number of Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented (Custom)** | **10** | **12** | **12** | **11** | **45** | **FY 2019 PMEP Target: 45**<br>**FY 2019 New Target: 45**<br>SAEP is targeting 45 Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented in FY 2019. |
| **Tracking and Capacity Building Indicators** | | | | | | | |
| **10** | **(#X) Percentage of RFP Section F Deliverables Submitted in a Timely Manner (Custom)** | **100%** | **100%** | **100%** | **100%** | **100%** | **FY 2019 PMEP Target: 100%**<br>**FY 2019 New Target: 100%**<br>The following are the deliverables that should be submitted in a timely manner in FY 2019:<br>• Biweekly<br>• Quarterly Report<br>• Annual Report<br>• Quarterly Financial Report<br>• Success Stories<br>• Participant Training Report<br>• Quarterly updates to the PATT |
| **11** | **Number of Institutions with Improved Capacity (4.8.2-14)** | **7** | **2** | **3** | **5** | **17** | **FY 2019 PMEP Target: 17**<br>**FY 2019 New Target: 17**<br>Below are the institution targeted for improved capacity for FY 2019:<br>**Quarter 1** \| **Quarter 2** \| **Quarter 3** \| **Quarter 4** |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| | | | | | | | • BERA<br>• LEC<br>• ECB<br>• ERB<br>• ESERA<br>• MERA<br>• ARENE<br>• EGENCO<br>• IPPO<br>• ESCOM<br>• ADER<br>• Ministry of Energy-Madagascar<br>• REA<br>• MME<br>• ZESCO<br>• BPC<br>• MNRE |
| **12** | **Number of Women in Energy Sector Leadership Roles (Custom)** | **0** | **1** | **2** | **1** | **4** | **FY 2019 PMEP Target: 4**<br>**FY 2019 New Target: 4**<br>Below are the target institutions for Women in Energy Sector Leadership Roles:<br>• ZESCO<br>• ESCOM, EGENCO<br>• LEC<br>• SEC<br>• EMU |
| **13a** | **Number of People Receiving Training in Global Clean Energy (4.8.2-6)** | **67** | **10** | **40** | **0** | **117** | **FY 2019 PMEP Target: 75**<br>**FY 2019 New Target: 117**<br>**Quarter 1**<br>• Y2.04.06.12.MDG – Capacity building for local mini-grid developers in project development process through the AOPEM association<br>• Y1.03.04.03.REG – Grid integration of renewable energy – Capacity Building Workshop<br>• Y1.03.04.04.REG – SAPP Operating Sub-Committee (OSC) Workshop on Quality of Supply<br>• Y2.01.01.01.ZMB – ERB capacity building in tariff reviews<br>• Y2.02.03.01.ZMB – Live training on nodal forecasting tool in preparation of IFC scaling solar projects coming online<br>**Quarter 2**<br>• Y2.04.06.14.MDG – Train local loan/credit officers on risks and risk management in solar off-grid projects with focus in SAVA<br>**Quarter 3**<br>• Y2.04.06.11.MDG – Capacity building to ADER in tender process and technical evaluation of mini-grid projects<br>• Y2.04.06.02.ZMB – Sales effectiveness training |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| | | | | | | | **Quarter 4**<br>• Y2.02.03.05.ZMB – Support women development on utility boards by providing training on recruiting, promoting and retaining women in utility leadership roles (Year 1)<br>• Y2.04.02.01.ZMB – Capacity building for regulatory and utility staff on smart grid deployment |
| **13b** | **Person-Hours of Training (4.8.2-29; MIL 4.4.1-34)** | **1364** | **400** | **480** | **0** | **2,244** | **FY 2019 PMEP Target: 450**<br>**FY 2019 New Target: 2,244**<br>This indicator is linked to indicator 13a above. |
| **Leverage/ Investment Indicator** | | | | | | | |
| **17 / PA18** | **Total Public and Private Funds Leveraged by USG for Energy projects (USD millions) (MIL 4.4.1-32) (PA)** | **142** | **35** | **63.5** | **224** | **464.5** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 464,5**<br>Below are the leverages by USG for energy projects in USD millions:<br>**Quarter 1**<br>• Lilongwe Solar – 25M<br>• Salima Solar PV Project – 60M<br>• Mozambique – Malawi – 35M<br>• Rooftop Solar Portfolio – 22M<br>**Quarter 2**<br>• Solar Reserve Urban Solar Farm – 10M<br>• Sunelex: Matjhabeng Solar – TBD<br>• OnePower Lesotho – 25M<br>**Quarter 3**<br>• District Power – 8.5M<br>• EDF-Innowind – 20M<br>• Golomoti Solar – 25M<br>• RSSC Grid-Tied Solar PV Plants – 10M<br>**Quarter 4**<br>• SEC Lavumisa – TBD<br>• Access Power – 224M |
| **Power Africa Tracking Indicators** | | | | | | | |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| **PA3** | **Clean Energy Generation Capacity Installed or Rehabilitated (MWs) (4.8.2-32) & Generation Capacity Commissioned (PA)** | **0** | **0** | **264.62** | **0** | **264.62** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 264,62**<br>**Quarter 3**<br>• Aggeneys Solar 40 MW: 07/2019<br>• Golden Valley Wind 117.72 MW: 07/2019<br>• Konkoonsies II Solar 75 MW: 07/2019<br>• Excelsior Wind 31.9 MW: 07/2019 |
| **PA4** | **Number of Transactions Commissioned (PA)** | **0** | **0** | **4** | **0** | **4** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 4**<br>**Quarter 3**<br>• Aggeneys Solar 40 MW: 07/2019<br>• Golden Valley Wind 117,72 MW: 07/2019<br>• Konkoonsies II Solar 75 MW: 07/2019<br>• Excelsior Wind 31,9 MW: 07/2019 |
| **PA5** | **Number of Transactions Pending Financial Closure (PA)** | **56** | **56** | **56** | **56** | **56** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 56**<br>56 transactions include 25 transactions that reached FC in FY 2018. |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| **PA6** | **Number of Transactions Reached Financial Closure (PA)** | **4** | **2** | **4** | **3** | **13** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 13**<br>The following transactions are expected to reach FC in FY 2019:<br>**Quarter 1**<br>• Salima Solar PV Project 18 MW: 12/2018<br>• Lilongwe Solar 25 MW: 12/2018<br>• Mozambique–Malawi 1000 MW: 12/2018<br>• Rooftop Solar Portfolio 22 MW: 12/2018<br>**Quarter 2**<br>• Sunelex: Matjhabeng Solar 66 MW: 03/2019<br>• OnePower Lesotho 20 MW: 03/2019<br>**Quarter 3**<br>• District Power 8 MW: 06/2019<br>• EDF-Innowind 15 MW: 05/2019<br>• Golomoti Solar 18 MW: 06/2019<br>• RSSC Grid-Tied Solar PV Plants 10 MW: 06/2019<br>**Quarter 4**<br>• EEC Lavumisa 10 MW: 07/2019<br>• Solar Reserve Urban Solar Farm 10 MW: 09/2019<br>• Access Power 130 MW: 09/2019 |
| **PA7** | **National Energy Mix Showing % of MWs from Clean Energy Technologies in Each Country (PA)** | | | | | | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 0**<br>Indicator will be tracked. Consistent with PA reporting and sources based on 2016 baseline numbers (or the latest reported). SAEP will start tracking this indicator in Q1 FY 2019. |
| **PA8** | **Kilometers of Power Lines Reached Financial Close (PA)** | **218** | **0** | **0** | **0** | **218** | **FY 2019 PMEP Target: TBD**<br>**FY 2019 New Target: 218**<br>Malawi-Mozambique transmission line is expected to reach financial close in Q1 FY 2019. |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| **PA9** | **Kilometers of Power Lines Constructed or Rehabilitated (PA)** | **0** | **0** | **0** | **0** | **0** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 0**<br>SAEP will track the indicator once SAEP start working with EDM. Malawi-Mozambique construction will be starting in Q3 FY 2019. |
| **PA14** | **Greenhouse Gas (GHG) Emissions Reduced, Sequestered, and/or avoided (4.8-7) (PA) (thousand tCO2e)** | **0** | **0** | **0** | **0** | **0** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 0: Results to be calculated using CLEER tool at the time of commissioning**<br>The following transactions are expected to be commissioned in FY 2019 - SAEP will calculate GHG in Q4:<br>• Aggeneys Solar 40 MW: 07/2019<br>• Golden Valley Wind 117.72 MW: 07/2019<br>• Konkoonsies II Solar 75 MW: 07/2019<br>• Excelsior Wind 31.9 MW: 07/2019 |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| **PA16** | **Utilization of Risk Mitigation Tools (PA)** | **1** | **3** | **4** | **6** | **14** | **FY 2019 PMEP Target: 0**<br>**FY 2019 New Target: 14**<br>**Quarter 1**<br>• Salima Solar PV Project 18 MW: 12/18<br>1. Political Risk Insurance (OPIC)<br>**Quarter 2**<br>• Sunelex: Matjhabeng Solar 66 MW: 03/2019<br>1. Political Risk Insurance (USDCA)<br>2. Government Consent & Support Agreement (USDCA)<br>3. Partial Risk Guarantee (USDCA)<br>**Quarter 3**<br>• Golomoti Solar 18 MW: 06/2019<br>1. Political Risk Insurance (OPIC)<br>• District Power 8 MW: 06/2019 (USDCA)<br>1. Political Risk Insurance (USDCA)<br>2. Government Consent & Support Agreement<br>3. Partial Risk Guarantee (USDCA)<br>**Quarter 4**<br>• Access Power 130 MW: 03/2019<br>1. Political Risk Insurance (MIGA)<br>2. Government Consent & Support Agreement (GCSA, Ministry of Finance)<br>3. Partial Risk Guarantee (World Bank/AfDB)<br>• Solar Reserve Urban Solar Farm 10 MW: 09/2019<br>1. Political Risk Insurance (USDCA)<br>2. Government Consent & Support Agreement (USDCA)<br>3. Partial Risk Guarantee (USDCA) |
| **PA17** | **US Exports Supplied for Clean and Cleaner Energy Projects (PA)** | | | | | | **FY 2019 PMEP Target: No set targets**<br>**FY 2019 New Target: No set targets**<br>This indicator has no set target for FY 2019 but the indicators will be tracked and actuals reported. |

| SAEP YEAR 2 QUARTERLY TARGETS | | | | | | | |
|---|---|---|---|---|---|---|---|
| # | Indicator | Q1 FY 19 | Q2 FY 19 | Q3 FY 19 | Q4 FY 19 | Year 2 Total | Notes |
| **PA19** | **Partner Commitment Tracking (PA)** | | | | | | **FY 2019 PMEP Target: No set targets**<br>**FY 2019 New Target: No set targets**<br>This indicator has no set target for FY 2019 but the indicators will be tracked and actuals reported. |